communicating said at least said first request to a remote data source;

receiving from said remote data source said remotely originated data to serve as a basis for displaying said video presentation;

processing said remotely originated data and said locally supplied data at said video apparatus in order to generate said locally generated image; and

simultaneously displaying said locally generated image and said image received from said remote video source at said video output device.

57. **(Four Times Amended)** The method of claim 56, further comprising the step of programming said video apparatus to perform any one of said steps of originating, communicating, receiving, processing, and displaying.

58. **(Three Times Amended)** The method of claim 57, wherein said video apparatus includes a computer and said step of programming comprises the steps of:

storing at least one processor instruction in said computer;

detecting an instruct signal received at said video apparatus; and

executing said at least one processor instruction in response to said instruct signal.

59. (Unchanged) The method of claim 58, further comprising the steps of:

detecting said at least one processor instruction in a signal transmitted from one of said remote video source and said remote data source; and

inputting said at least one processor instruction to said computer.

60. (Unchanged) The method of claim 56, further comprising processing an identifier.

61. (Unchanged) The method of claim 60, wherein said identifier identifies at least one of:

mass medium programming;

digital programming;

a communications resource; and

said locally generated image.

62. **(Twice Amended)** The method of claim 61, wherein said identifier is received at said video apparatus from one of said remote video source and said remote data source.

63. **(Twice Amended)** The method of claim 56, wherein said video apparatus communicates with said remote data source via a digital information channel.

64. **(Twice Amended)** The method of claim 56, further comprising the step of determining that said locally generated image is complete.

65. **(Five Times Amended)** The method of claim 56, wherein said video apparatus includes a computer, said method further comprising the steps of:

organizing first information contained in a first discrete signal with second information contained in a second discrete signal in order to enable said video apparatus to process at least one processor instruction which comprises said first information and said second information; and

causing said computer to respond to said at least one processor instruction.

66. (Unchanged) The method of claim 65, wherein said step of organizing is performed by a processor.

67. (Unchanged) The method of claim 56, further comprising the step of storing first programming in order to present a portion of said at least one of said locally generated image and said image received from said remote video source at a particular time or place.

68. (Unchanged) The method of claim 67, wherein said video output device displays said locally generated image based on said step of storing.

69. **(Five Times Amended)** The method of claim 67, wherein said video apparatus includes a computer which stores said remotely originated and said locally supplied data.

70. **(Four Times Amended)** The method of claim 67, wherein said video apparatus includes a computer which generates said locally generated image in response to at least one instruction, said method further comprising the step of inputting said first programming to said computer.

71. (Unchanged) The method of claim 70, further comprising the step of programming said computer to respond to said at least one instruction.

72. (Unchanged) The method of claim 71, wherein said step of programming comprises the steps of:

receiving a programming transmission from said remote video source; and

inputting at least a portion of said programming transmission to said computer.

73. **(Three Times Amended)** The method of claim 72, wherein said video apparatus receives encrypted video from said remote video source.

74. **(Twice Amended)** The method of claim 71, wherein said video apparatus includes a local device which inputs selected information to said computer, said method further comprising the step of inputting said at least one instruction from said local device to said computer.

75. **(Cancelled)**

76. **(Four Times Amended)** The method of claim 56 wherein each of a plurality of video apparatus stores respective remotely originated data and locally supplied data in a file, each said file of a particular video apparatus of said plurality of video apparatus being of a format identical to the files of the others of said plurality of video apparatus containing respective remotely originated data and locally supplied data of said others of said plurality of video apparatus.

77. **(Cancelled)**

78. **(Cancelled)**

79. **(Cancelled)**

80. **(Four Times Amended)** A method of delivering a video presentation at at least one receiver station of a plurality of receiver stations each of which is adapted to detect the presence of at least one signal, said method comprising the steps of:

transmitting a signal from an origination transmitter to a remote intermediate transmitter station, said signal containing video and an instruct signal which is operative at said at least one receiver station to instruct said at least one receiver station to at least one of generate and output a locally generated portion of said video presentation and cause said locally generated portion of said video presentation to be displayed in conjunction with said video; and

transmitting at least one control signal from said origination transmitter to said remote intermediate transmitter station before a specific time, wherein said at least one control signal is effective at said remote intermediate transmitter station to control communication of at least one of said video and said instruct signal.

81. **(Three Times Amended)** The method of claim 80, wherein said at least one control signal comprises information which, at said remote intermediate transmitter station, identifies a portion of an information transmission that contains said video, said method further comprising the step of:

transmitting from said origination transmitter a second control signal which, at said remote intermediate transmitter station, controls the communication of said portion of said information transmission.

82. (Unchanged) The method of claim 80, further comprising the step of transmitting one of said at least one control signal before transmitting said video to said remote intermediate transmitter station.

83. **(Cancelled)**

84. **(Four Times Amended)** A method of delivering a video presentation at at least one receiver station of a plurality of receiver stations each of which is adapted

to detect the presence of at least one signal, wherein at least one processor instruction comprises information content of separate ones of a plurality of discrete signals and said at least one receiver station is capable of providing said at least one processor instruction, said method comprising the steps of:

receiving video at a transmitter station;

delivering said video to a transmitter;

receiving a first discrete signal of said plurality of discrete signals at said transmitter station, wherein said first discrete signal is operative to provide said at least one processor instruction at said at least one receiver station by enabling said at least one receiver station to organize information contained in said first discrete signal with information contained in a second of said plurality of discrete signals, and said at least one processor instruction instructs said at least one receiver station to deliver a locally generated image for display in conjunction with said video, said locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction;

transferring said first discrete signal to said transmitter; and

transmitting said video and said first discrete signal to said at least one receiver station.

85. (Unchanged) The method of claim 84, wherein at least one of identification data and said first discrete signal is embedded in a signal containing said video.

86. (Unchanged) The method of claim 84, wherein said step of transmitting directs said video to said plurality of receiver stations at the same time and each of said plurality of receiver stations one of receives and processes said first discrete signal concurrently.

87. (Unchanged) The method of claim 84, wherein said video is encrypted.

88. **(Cancelled)**

89. (Unchanged) The method of claim 56, wherein said video output device includes a viewing screen which displays a first image received from said remote programming source and said step of displaying comprises replacing less than all of said first image with said locally generated image.

90. (Unchanged) The method of claim 89, wherein said locally generated image is overlaid on said first image.

91. **(Three Times Amended)** The method of claim 56, wherein said video apparatus includes an audio receiver and ceases displaying said locally generated video image, said method further comprising the steps of:

receiving, at said audio receiver, audio which describes information displayed in said video presentation; and

outputting said audio at said video apparatus before ceasing to display said locally generated video image.

92. **(Cancelled)**

93. **(Twice Amended)** A method of outputting a video presentation at a receiver station, said video presentation comprising a sequence of outputs and including, as a first of said sequence of outputs, a video image, said method comprising the steps of:

receiving at least one information transmission at said receiver station, said at least one information transmission containing at least one first discrete signal;

detecting said at least one first discrete signal in said at least one information transmission;

passing said detected at least one first discrete signal to at least one processor;

organizing information contained in said at least one first discrete signal at said receiver station with information contained in a second discrete signal;

passing at least one processor instruction from or within said at least one processor, said at least one processor instruction comprising said organized information from said step of organizing;

responding to said at least one processor instruction at said receiver station based on said step of passing said at least one processor instruction;

generating an image to replace only a portion of said video image by processing at least one user specific subscriber datum stored at said receiver station prior to said step of organizing based on said step of responding to said at least one processor instruction; and

outputting said video presentation to a user, said video presentation containing, firstly, said video image and, secondly, said generated image to replace said only said portion of said video image.

94. **(Once Amended)** The method of claim 93, wherein a receiver specific control signal is generated based on a third discrete signal, said method further including the step of:

selecting said video image in response to said generated receiver specific control signal.

95. **(Once Amended)** The method of claim 94, further comprising the step of controlling at least one of a receiver, a switch, a decryptor, an enabling device, a

storage device, a computer, and a second output device based on said receiver specific control signal.

96. (Unchanged) The method of claim 93, wherein said generated image to replace said only said portion of said video image contains at least one receiver specific datum, said method further comprising the steps of:

receiving said video image from a remote station;

generating said at least one receiver specific datum by processing information stored in a computer; and

outputting at least one of a simultaneous and a sequential presentation of said received video image and said generated at least one receiver specific datum.

97. (Unchanged) The method of claim 93, further comprising assembling said at least one processor instruction based on said at least one first discrete signal.

98. (Unchanged) The method of claim 93, wherein said at least one first discrete signal includes only partial information of an identifier and said at least one processor instruction includes said identifier.

99. (Unchanged) The method of claim 93, wherein said at least one first discrete signal designates a specific user input to process, said method further comprising the step of generating output by processing said specific user input.

100. (**Once Amended**) The method of claim 93, further comprising the steps of:

receiving said at least one user specific subscriber datum; and

passing said at least one user specific subscriber datum to a storage device.

101. **(Once Amended)** The method of claim 93 wherein each of a plurality of receiver stations stores a respective user specific subscriber datum in a file, each said file of a particular receiver station of said plurality of receiver stations being of a format identical to the files of the others of said plurality of receiver stations containing respective subscriber data of said others of said plurality of receiver stations.

102. (Unchanged) The method of claim 93, said method further including the step of:

communicating a request for information to a remote station.

103. **(Once Amended)** The method of claim 93, wherein a receiver specific control signal is processed based on a third discrete signal, said method further including the step of outputting said video image in response to said receiver specific control signal.

104. **(Twice Amended)** The method of claim 93, wherein a receiver specific control signal is processed based on a third discrete signal, said method further including the step of processing user input based on said receiver specific control signal.

105. **(Twice Amended)** The method of claim 93, wherein a receiver specific control signal is processed based on a third discrete signal and said image to replace said only said portion of said video image is generated based on said receiver specific control signal.

106. **(Twice Amended)** The method of claim 93, wherein a receiver specific control signal is processed based on a third discrete signal, wherein said step of

outputting said video presentation includes one of a simultaneous and a sequential presentation of said video image and said generated image based on said receiver specific control signal.

107. (Unchanged) The method of claim 93, wherein said video image is received in one of a television and a multichannel information transmission.

108. (Unchanged) The method of claim 107, wherein said one of a television and a multichannel information transmission comprises an analog television signal.

109. (Unchanged) The method of claim 93, wherein said receiver station includes a video monitor which outputs said video presentation, wherein said video presentation comprises a series of computer generated video display outputs, and wherein by processing data said at least one processor delivers said generated image to replace said only said portion of said video image at said video monitor in one of said series of computer generated display outputs, said method further comprising the step of receiving said data from a remote data source.

110. **(Once Amended)** A method of outputting a video presentation at at least one of a plurality of receiver stations each of said plurality of receiver stations being adapted to process a plurality of processor instructions, said method comprising the steps of:

receiving at at least one transmitter station at least a first discrete signal containing information, wherein (i) a first of said plurality of processor instructions comprises information organized from said information contained in said first discrete signal and information contained in a second discrete signal, (ii) said first processor instruction is effective to program said at least one of said plurality of receiver stations to

be able to respond to an additional processor instruction of said plurality of processor instructions subsequently received by said at least one of said plurality of receiver stations, said additional processor instruction being effective at said at least one of said plurality of receiver stations to output only a portion of said video presentation, said portion being based on user specific data stored at said at least one of said plurality of receiver stations prior to said organizing of said first processor instruction, and (iii) said first processor instruction has at said at least one of said plurality of receiver stations a target processor to process data;

transferring said at least said first discrete signal to at least one transmitter, and transmitting a first information signal including said first discrete signal;

receiving said additional processor instruction at said at least one transmitter station; and

transferring said additional processor instruction to said at least one transmitter, and transmitting a second information transmission including said additional processor instruction.

111. (Unchanged) The method of claim 110, wherein one of a combined and a sequential output of a video image and said only said portion of said video presentation is delivered at said output device of said at least one of said plurality of receiver stations, said method further comprising the steps of

receiving said video image at said at least one transmitter station; and

transmitting said video image to said at least one of said plurality of receiver stations.

112. **(Twice Amended)** The method of claim 110, wherein at least one of (i) said first information signal includes identification data pertaining to said video

presentation and (ii) said at least said first discrete signal is embedded in a non-visible portion of a signal containing said video image.

113. **(Twice Amended)** The method of claim 110, wherein said portion of said video presentation is displayed at said at least one of said plurality of receiver stations and said at least one processor instruction programs said processor at least one of (1) to output at least two of video, audio, and text at least one of simultaneously and sequentially with said portion of said video presentation and (2) to select information that supplements said portion of said video presentation.

114. **(Once Amended)** The method of claim 110, wherein an assembler at said at least one of said plurality of receiver stations organizes said information in said first and second discrete signals into said at least one processor instruction.

115. **(Cancelled)**

116. **(Twice Amended)** A method of delivering a video presentation at one receiver station of a plurality of receiver stations, each of said plurality of receiver stations being adapted to detect the presence of at least one signal, wherein said one receiver station displays video received at said one receiver station from a remote intermediate transmitter station and is adapted to display a locally generated image in conjunction with said video based on at least one processor instruction, said method comprising the steps of:

transmitting a first discrete signal from an origination transmitter to said remote intermediate transmitter station, wherein said at least one processor instruction is comprised of information contained in said first discrete signal and information contained in a second discrete signal, and wherein one of said one receiver station and said remote

intermediate transmitter station is adapted to organize said information contained said first discrete signal with said information contained in said second discrete signal; and

transmitting at least one control signal from said origination transmitter station to said remote intermediate transmitter station before a specific time, wherein,

(i) when said remote intermediate transmitter station is adapted to organize, said at least one control signal is effective at said remote intermediate transmitter station to control communication of said at least one processor instruction, and

(ii) when said one receiver station is adapted to organize, said at least one control signal is effective at said remote intermediate transmitter station to control communication of said first discrete signal.

117. (**Twice Amended**) The method of claim 116, wherein at least one of a combined and a sequential output of a video image and a portion of said video presentation is delivered at said output device of said one receiver station of said plurality of receiver stations, said method further comprising the steps of:

receiving said video image at said remote intermediate transmitter station; and

transmitting said video image to said one receiver station of said plurality of receiver stations.

118. (Unchanged) The method of claim 116, further comprising the step of embedding said at least one control signal in an information transmission containing said first discrete signal before transmitting said first discrete signal to said remote intermediate transmitter station.

119. (**Cancelled**)

120. (Unchanged) The method of claim 116, further comprising the step of:

transmitting said second discrete signal.

121. (Unchanged) The method of claim 116, wherein said remote transmitter station transmits encrypted video to said one receiver station of said plurality of receiver stations.

122. (Unchanged) The method of claim 116, wherein a television program comprises a series of computer generated images, wherein at least one of said plurality of receiver stations includes a television monitor which displays said video presentation in said television monitor to display only a portion of said video presentation in one of said series of computer generated images.

123. **(Twice Amended)** A method of delivering a video presentation at at least one of a plurality of receiver stations, each of said plurality of receiver stations being adapted to detect the presence of at least one signal, wherein said video presentation includes a first image which is received at said at least one of said plurality of receiver stations from a remote transmitter station, and wherein an identifier is operative at said at least one of said plurality of receiver stations to designate a second image, said method comprising the steps of:

receiving at said remote transmitter station at least one instruct signal;

transferring said at least one instruct signal to at least one transmitter;

receiving at least one first discrete signal and at least one control signal at said remote transmitter station, said at least one first discrete signal including only partial information of said identifier and said at least one control signal operative to provide said identifier and designate at said at least one of said plurality of receiver stations by

organizing said partial information with information contained in a second discrete signal at said at least one of said plurality of receiver stations, wherein said identifier designates said second image at said at least one of said plurality of receiver stations and is operative to cause said at least one instruct signal to be effective at said at least one of said plurality of receiver stations to generate and output said second image of said video presentation for delivery in conjunction with said first image, wherein said second image is based on user specific data stored at said at least one of said plurality of receiver stations prior to said organizing of said identifier; and

transferring said at least one first discrete signal and said at least one control signal to said at least one transmitter, said at least one transmitter transmitting at least one information transmission containing said at least one instruct signal, said at least one first discrete signal, and said at least one control signal to said at least one of said plurality of receiver stations.

124. (**Twice Amended**) The method of claim 123, wherein at least one of a combined and a sequential output of a video image and only a portion of said video presentation is delivered at said output device of said at least one of said plurality of receiver stations, said method further comprising the steps of

receiving said video image at said remote transmitter station; and

transmitting said video image to said at least one of said plurality of receiver stations.

125. (Unchanged) The method of claim 123, wherein at least one of said at least one instruct signal and said at least one control signal is embedded in a non-visible portion of at least one of a video signal, a multichannel broadcast signal, and a cablecast signal that contains video.

126. (Unchanged) The method of claim 123, wherein said at least one transmitter transmits said at least one instruct signal, said at least one first discrete signal, and said at least one control signal in a data transmission.

127. **(Twice Amended)** The method of claim 123 further comprising the step of transmitting data that enable said at least one of said plurality of receiver stations to determine that said second image is complete.

128. **(Cancelled)**

129. (Unchanged) The method of claim 123, further comprising the step of:

transmitting to said at least one of said plurality of receiver stations at least one datum that designates one of a time and a channel of transmission of said at least one instruct signal.

130. **(Cancelled)**

131. **(Cancelled)**

132. **(Cancelled)**

133. **(Cancelled)**

134. **(Cancelled)**

135. **(Cancelled)**

136. **(Cancelled)**

137. **(Cancelled)**

138. **(Cancelled)**

139. **(Cancelled)**

140. (Unchanged) The method of claim 123, further comprising the step of transmitting to said at least one of said plurality of receiver stations said at least one control signal to cause said at least one of said plurality of receiver stations to communicate said at least one instruct signal from a tuner to said processor.

141. **(Twice Amended)** The method of claim 123, wherein (i) said video presentation comprises a television program; and (ii) said at least one of said plurality of receiver stations includes a television monitor which displays said television program.

142. **(Cancelled)**

143. **(Cancelled)**

144. **(Cancelled)**

145. **(Cancelled)**

146. **(Cancelled)**

147. **(Cancelled)**

148. **(Cancelled)**

149. **(Cancelled)**

150. **(Cancelled)**

151. **(Cancelled)**

152. **(Cancelled)**

153. **(Cancelled)**

154. **(Cancelled)**

155. **(Cancelled)**

156. **(Cancelled)**

157. **(Cancelled)**

158. **(Cancelled)**

159. **(Cancelled)**

160. **(Cancelled)**

161. **(Cancelled)**

162. **(Twice Amended)** A method of delivering a video presentation at at least one receiver station of a plurality of receiver stations, wherein said at least one receiver station is programmed to process code and adapted to detect at least a first of a plurality of discrete signals, said code comprised of information contained in at least two of said plurality of discrete signals, said method comprising the steps of:

receiving a video image at a transmitter station;

delivering said video image to a transmitter;

receiving said at least said first of said plurality of discrete signals at said transmitter station, wherein said at least said first of said plurality of discrete signals enables said at least one receiver station to organize information contained in said at least said first of said plurality of discrete signals with information contained in a second of said plurality of discrete signals to provide said code and, wherein said code enables said at least one receiver station to be able to identify a locally generated image and output said locally generated image in conjunction with said video image, said locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said code;

transferring said at least said first of said plurality of discrete signals to said transmitter; and

transmitting said video image and said at least said first of said plurality of discrete signals from said transmitter station to said at least one receiver station.

163. (Unchanged) The method of claim 162, wherein said at least said first of said plurality of discrete signals comprise a portion of identification data and is embedded in a signal containing said video image.

164. (Unchanged) The method of claim 162, wherein said step of transmitting directs said video image to said plurality of receiver stations at the same time and each of said plurality of receiver stations receives or responds to said code concurrently.

165. (Unchanged) The method of claim 162, wherein said step of transmitting directs at least said video image to said at least one receiver station of said plurality of receiver stations in a television or other electronic transmission.

166. (Unchanged) The method of claim 162, further comprising the steps of receiving said video image at a receiver in said transmitter station, communicating said video image from said receiver in said transmitter station to a memory location, and storing said video image at said memory location for a period of time prior to said delivering said video image to said transmitter.

167. **(Once Amended)** A method of outputting a video graphic presentation at a receiver station including:

receiving, from a remote transmitter station, a transmission that contains at least a first discrete signal of code and a first completed full-screen video graphic image, said first completed full-screen video graphic image containing at least one graphic image;

passing said received first completed full-screen video graphic image to a video monitor for delivery to a user, said video monitor having a viewing screen;

displaying said first completed full-screen video graphic image at said video monitor, said displayed first completed full-screen video graphic image filling the entire surface area of said viewing screen;

detecting said at least a first discrete signal of said code;

passing said at least a first discrete signal of said code to at least one processor;

organizing information contained in said at least a first discrete signal at said receiver station with information contained in a second discrete signal based on at least one control signal;

responding to at least one processor instruction at said receiver station, said at least one processor instruction comprising said organized information from said step of organizing;

passing, to said video monitor based on said step of responding to at least one processor instruction, only a portion of a locally generated second completed full-screen video graphic image, wherein said only a portion of said locally generated second completed full-screen video graphic image is based on user specific data stored at said receiver station prior to said step of organizing; and

displaying, at said video monitor, said second completed full-screen video graphic image, said displayed second completed full-screen video graphic image filling the entire surface area of said viewing screen and containing said passed only a portion of said second completed full-screen video graphic image and only a portion of said first completed full-screen video graphic image,

wherein said method delivers said video graphic presentation.

168. (Unchanged) The method of claim 167, further comprising a step of generating said passed only a portion of said second completed full-screen video graphic image in accordance with said at least one processor instruction.

169. (Unchanged) The method of claim 167, further comprising the steps of receiving audio from said remote transmitter station, and outputting said audio at a speaker during said video graphic presentation.

170. (Unchanged) The method of claim 169 wherein said audio describes information displayed in said video graphic presentation.

171. **(Twice Amended)** A method of delivering a video graphic presentation comprising a first completed full-screen video graphic image and a second completed full-screen video graphic image at at least one receiver station of a plurality of receiver stations, wherein each of said plurality of receiver stations (a) includes a receiver, a signal detector, a processor to execute at least one processor instruction, and a video monitor that has a viewing screen, (b) is adapted to detect the presence of one or more control signals, and (c) is programmed to process said at least one processor instruction, wherein said at least one processor instruction instructs said at least one receiver station to pass only a portion of said second completed full-screen video graphic image to said video monitor, wherein said second completed full-screen video graphic image fills the entire surface area of said viewing screen when displayed at said video monitor and contains said only a portion of said second completed full-screen video graphic image and only a portion of said first completed full-screen video graphic image, wherein said first completed full-screen video graphic image fills the entire surface area of said viewing screen when displayed at said video monitor, and wherein said second completed full-screen video graphic image contains at least one graphic image, said method comprising the steps of:

receiving at a transmitter station at least one discrete signal that contains only partial information of said at least one processor instruction;

transferring said at least one discrete signal to a transmitter;

receiving said one or more control signals at said transmitter station, wherein said one or more control signals are operative at said at least one receiver station to provide said at least one processor instruction by causing said at least one receiver station to organize said partial information with information contained in a second discrete signal,

said at least one processor instruction directing, to said video monitor, said only a portion of said second completed full-screen video graphic image, said viewing screen displaying said only a portion of said second completed full-screen video graphic image in conjunction with said only a portion of said first completed full-screen video graphic image, wherein said only a portion of said second completed full-screen video graphic image is based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction;

transferring said one or more control signals to said transmitter; and

transmitting a transmission comprising said at least one discrete signal and said one or more control signals,

wherein said method delivers said video graphic presentation.

172. (Unchanged) The method of claim 171 further comprising a step of transmitting at least a portion of said first completed full-screen video graphic image.

173. (Unchanged) The method of claim 172, wherein said first completed full-screen video graphic image also contains said at least one graphic image, said method further comprising a step of transmitting said at least one graphic image.

174. (Unchanged) The method of claim 171 further comprising a step of transmitting audio that states a significance of information displayed in said video graphic presentation.

175. **(Twice Amended)** A method of delivering a video graphic presentation at at least one receiver station of a plurality of receiver stations, each receiver station of said plurality of receiver stations being adapted to detect the presence of signals and

including a video monitor, said video monitor having a viewing screen, said method comprising the steps of:

transmitting from an origination station transmitter to a remote intermediate transmitter station a first completed full-screen video graphic image that fills the entire surface area of said viewing screen when displayed at said video monitor, said first completed full-screen video graphic image to be transmitted by a remote intermediate transmitter station and displayed at said video monitor;

transmitting from said origination station transmitter to said remote intermediate transmitter station, at least one discrete signal that contains information comprising only a part of at least one processor instruction, wherein said at least one processor instruction is organized from information contained in said at least one discrete signal with information contained in a second discrete signal, wherein said at least one receiver station generates and outputs only a portion of a second completed full-screen video graphic image based on said at least one processor instruction, said second completed full-screen video graphic image filling the entire surface area of said viewing screen when displayed at said video monitor and containing said only a portion of a second completed full-screen video graphic image in conjunction with only a portion of said first completed full-screen video graphic image, wherein at least one of said first completed full-screen video graphic image and said second completed full-screen video graphic image contains at least one graphic image;

transmitting one or more control signals from said origination transmitter to said remote intermediate transmitter station, wherein,

(1) when said remote intermediate transmitter station is adapted to organize said at least one processor instruction, said one or more control signals are effective at said remote intermediate transmitter station to control communication of said first completed full-screen video graphic image and said at least one processor instruction, and

(2) when said at least one receiver station is adapted to organize said at least one processor instruction, said one or more controls signals are effective at said remote intermediate transmitter station to control communication of said first completed full-screen video graphic image and said at least one discrete signal.

176. (Unchanged) The method of claim 175, further comprising a step of transmitting audio that describes information displayed in said video graphic presentation.

177. **(Cancelled)**

178. **(Cancelled)**

179. **(Once Amended)** A method of outputting a video graphic presentation at a receiver station including:

receiving, from a remote transmitter station, a transmission that contains at least a first discrete signal and a series of video images that each contain at least one graphic image;

passing said received series of video images to a video monitor for delivery to a user, said video monitor having a viewing screen;

displaying, at said video monitor said series of video images, said series of video images including a first completed full-screen video graphic image, and said displayed first completed full-screen video graphic image filling the entire surface area of said viewing screen;

detecting said at least a first discrete signal;

passing said at least a first discrete signal to at least one processor;

organizing information contained in said at least a first discrete signal at said receiver station with information contained in a second discrete signal based on at least one control signal;

responding to at least one processor instruction at said receiver station, said at least one processor instruction comprising said organized information from said step of organizing;

passing, to said video monitor based on said step of responding to said at least one processor instruction, only a portion of a locally generated second completed full-screen video graphic image, wherein said only a portion of said locally generated second completed full-screen video graphic image is based on user specific data stored at said receiver station prior to said step of organizing; and

displaying said second completed full-screen video graphic image at said video monitor, said displayed second completed full-screen video graphic image filling the entire surface area of said viewing screen and containing said passed only said portion of said second completed full-screen video graphic image and only a portion of said first completed full-screen video graphic image,

wherein said method delivers said video graphic presentation.

180. **(Cancelled)**

181. (Unchanged) The method of claim 179, further comprising the steps of receiving audio from said remote transmitter station, and outputting said audio at a speaker during said video graphic presentation.

182. (Unchanged) The method of claim 181 wherein said audio states a significance of information displayed in said video graphic presentation.

II. SUMMARY OF CLAIMS (AS AMENDED) AND SUPPORT THEREFOR

A. Independent Claim 56

1. Summary of Claim 56

Claim 56 is directed to a method for presenting a video presentation including a remotely-transmitted image and a locally-generated image. The remotely-transmitted image comes from a remote video source. The locally-generated image is created based on "remotely originated" data received from a remote data source and "locally supplied" data. The "remotely originated" data is received in response to a request sent from the user station to the remote data source. The remotely-transmitted image and the locally-generated image are displayed "simultaneously."

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

Claim 56 is supported by the "Wall Street Week" example in the 1987 specification (WSW 1987) and the "Wall Street Week" example provided in the 1981 specification (WSW 1981).[2] In the 1987 specification, a user station requests stock data from a remote data station. *See* 1987 Spec., P. 449, ll. 13-33. In WSW 1987, this stock data is processed in order to create the locally-generated image (of user's stock performance) presented with the remotely-transmitted image (studio generated graphic). *See* 1987 Spec., P. 451, ll. 1-3.

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[2] The 1987 specification refers to the specification of application serial number 08/113,329 filed September 11, 1987. This application claims the benefit of application serial number 08/113,329 under 35 U.S.C. § 120 and includes an identical specification.

The 1981 specification refers to the specification of application serial number 06/317,510 filed November 3, 1981. The instant application also claims the benefit of application serial number 06/317,510 under 35 U.S.C. § 120. Citations to the 1981 specification are to U.S. Patent No. 4,694,490, which issued on application serial number 06/317,510.

The WSW 1981 example also discloses these features. In the 1981 specification, a user station may automatically query a data service for closing stock prices. *See* 1981 Spec., Col. 19, ll. 35-41. In WSW 1981, these stock prices are processed to create a graphic video overlay of the user's own stocks' performance overlaying a studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2.

3. Overview of Claim Amendments

a. Independent Claim 56

Claim 56 has been amended to recite the receiving and processing of requested remotely originated and locally supplied data in order to generate a locally generated image and simultaneously display said locally generated image and said image received from said remote video source. Claim 56 has also been amended to delete the modifier "interactive" when referring to the video apparatus. Applicants address the Examiner's concerns regarding the term "interactive" below and maintain that this claim, and those claims dependent therefrom, do encompass methods for use with an interactive video apparatus. Claim 56 has also been amended to delete the recitation of a second request.

Support for the amended claim recitation of "receiving from said remote data source said remotely originated data" exists in the WSW 1987 example. Closing price data is received from a remote data source. Specifically, support for receiving the requested "remotely originated" data is found in the disclosure of a microcomputer automatically telephoning a remote data service computer to cause the remote computer to select and transmit the particular closing price datum or data of the stock or stocks of the portfolio stored in the microcomputer. *See* 1987 Spec., P. 449, ll. 26-34. Support in the 1981 specification can be found in the WSW 1981 disclosure of the microcomputer receiving each weekday by means of a digital information channel closing stock prices. *See* 1981 Spec., Col. 19, ll. 35-38. The microcomputer may automatically query a data service for the closing stock prices. *See* 1981 Spec., Col. 19, ll. 38-39.

Support for the amended claim recitation of "processing said remotely originated data and said locally supplied data" exists in the WSW 1987 example. Specifically, support for processing "remotely originated data" is found in the disclosure of a remote stock-price-data-transmission station transmitting to the microcomputer particular closing price data (the remotely originated data) and causing the subscriber stations to select and process their specific information of interest. *See* 1987 Spec., P. 449, ll. 19-26. Support exists in the 1981 specification disclosing the microcomputer recording those prices (from all of the closing stock prices received remotely from a digital information channel) that relate to the stocks stored in its portfolio. *See* 1981 Spec., Col. 19, ll. 35-41. Support for processing "locally supplied data" is found in the 1987 disclosure of causing the microcomputer to record the particular closing price datum that apply to the particular stocks of the preprogrammed portfolio (the locally supplied data) of the subscriber's computer, s*ee* 1987 Spec., P. 449, ll. 15-20, and the disclosure of the use of such data to generate a graphic image of the subscriber's stock portfolio performance. *See* 1987 Spec., P. 24, ll. 22-27. Support for processing "locally supplied data" is found in the 1981 disclosure of recording specific stock closing data based on the stock portfolio stored locally in the microcomputer, s*ee* 1981 Spec., Col. 19, ll. 35-41, and the disclosure of the use of such data to generate a graphic of the viewer's stocks' performance. *See* 1981 Spec., Col. 19, ll. 48-51, and Col. 19, l. 76 - Col. 20, l. 1.

Support for the amended claim recitation of processing data at a "video apparatus in order to generate said locally generated image" is found in the 1987 disclosure of the microcomputer accessing the subscriber's portfolio data file, calculating the performance of the subscriber's portfolio and constructing a graphic image of the portfolio's performance. *See* 1987 Spec., P. 24, ll. 22-27. Support for the amended recitation is found in the 1981 disclosure of a microcomputer generating several graphic video overlays depicting the viewer's own stocks' performance. *See* 1981 Spec., Col. 19, l. 48-53.

Support for the amended claim recitation of "simultaneously displaying said locally generated image and said image received from said remote video source at said video output device" exists in the WSW 1987 example. Specifically, support for "simultaneously" displaying a locally generated image and a "image received from said remote video source" at a video output device is found in the disclosure of the microcomputer overlaying graphic information in its graphic card (the locally generated image) onto the received composite video information and transmitting the combined information to the TV for display. *See* 1987 Spec., P. 26, ll. 3-10. Support for the amended claim recitation is found in the 1981 disclosure of a microcomputer generated graphic of the viewer's own stocks' performance that overlays a studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2.

b. Dependent Claims 57, 58, 62, 63, 70, 73 and 74

Claims 57, 58, 62, 63, 70, 73 and 74 have been amended to delete the term "interactive" modifying the video apparatus. These amendments are made to be consistent with the amendment to independent claim 56. These amendments do not add new matter to these claims, and the amended claims remain fully supported under 35 U.S.C. § 112 by the previously identified support for claims 57, 58, 62, 63, 70, 73 and 74.

c. Dependent Claim 64

Claim 64 has been amended to set forth the method of claim 56 and the additional the step of determining that the locally generated image is complete. Applicants claim a 1981 priority date with respect to claim 64 and support will be demonstrated only in the 1987 specification.

Support for the step of determining that the locally generated image is complete is found in the 1987 specification's disclosure of a SPAM message causing the combining of images resulting in an overlay only at a subscriber station where information exists of

the completion of the identified overlay. *See* 1987 Spec., P. 452, ll. 24-30. The 1987 specification specifically discusses the generation of an image at receiver station, in which the SPAM controller compares information in the microcomputer's memory. *See* 1987 Spec., P. 124, ll. 25-28. This comparison produces a match, thus indicating that the microcomputer has completed placing the appropriate Fig. 1A image (i.e., the locally generated image) at video RAM. *See* 1987 Spec., P. 124, ll. 28-30.

d. Dependent Claim 65

Claim 65 has been amended to depend directly on claim 56 and to overcome the Examiner's rejection that no antecedent basis existed for the previously recited "said first discrete signal." The claim now recites "a first discrete signal" thus overcoming the Examiner's rejection. Claim 65 is also amend to conform to the deletion of the term "interactive" in claim 56.

The amendments do not add any new matter to the claim, and the amended claim remains fully supported under 35 U.S.C. § 112 by the previously identified support for claim 65.

e. Dependent Claim 69

Claim 69 has been amended to recite a video apparatus which includes "a computer which stores said remotely originated and said locally supplied data." Previously, the claim only recited "a computer which stores said data." Claim 69 is also amended to conform to the deletion of the term "interactive" in claim 56.

Applicants identify support for the amended portion of claim 69 in their discussion of the support for the amendments to claim 56.

f. Dependent Claim 76

Claim 76 has been amended to set forth the method of claim 56 wherein each of a plurality of video apparatus stores respective remotely originated data and locally supplied data in a file, where each said file of a particular video apparatus of said

plurality of video apparatus being of a format identical to the files of the others of said plurality of video apparatus containing respective remotely originated data and locally supplied data of said others of said plurality of video apparatus. Applicants claim a 1981 priority date with respect to claim 76 and support will be demonstrated only in the 1987 specification.

Support for each video apparatus storing remotely originated data and locally supplied data in a file of a format identical to the files of other video apparatus containing respective remotely originated data and locally supplied data is found at P. 21, ll. 5-14 and 25-31 of the 1987 specification. This portion of the 1987 specification discloses a microcomputer (video apparatus) that is preprogrammed to receive an input of signals and respond in a predetermined fashion to instruction signals embedded in the WSW program transmission. *See* 1987 Spec., P. 21, ll. 20-24. The 1987 specification goes on to disclose other similarly configured and preprogrammed subscriber stations (i.e., video apparatus or microcomputers) that tune to the WSW program transmission and have records in their financial portfolio files holding, in identical format, information on the particular investments of the subscriber. *See* 1987 Spec., P. 21, ll. 25-31. The recited "remotely originated data and locally supplied data" corresponds to the disclosed information on the particular investments of the subscriber that is stored, in identical format, as records in the financial portfolio files of the microcomputer.

g. Dependent Claim 91

Claim 91 has been amended from "interactive video apparatus" to "video apparatus," to clarify the antecedent basis with respect to the amendment in independent claim 56.

B. Independent Claim 80

1. Summary of Claim 80

Claim 80 is a transmitter claim for an "origination transmitter station" (OTS) that transmits control signals and instruct signals to control operations at a downstream "intermediate transmitter station" (ITS) and a further downstream receiver station. The OTS transmits a signal having video and an instruct signal that controls operations at a receiver station. The OTS also transmits a control signal that controls operations at the ITS. The control signal is operative at the ITS to control the communication of the video and/or the instruct signal at the ITS. The instruct signal is operative at the receiver station to generate and/or output locally-generated video and cause the local video to be presented with the remotely-transmitted video at the receiver station.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

Claim 80 is supported by the WSW 1987 example and the WSW 1981 example. In the WSW 1987 example, the programming studio (the OTS) transmits the program which includes instruct signals (*see* 1987 Spec., P. 23, l. 35 - P. 24, l. 1) that are effective at the receiver station to cause an overlay of locally-generated content (*see* 1987 Spec., P. 25, l. 34 - P. 26, l. 11). The programming studio transmits the program and instruct signals through an ITS as shown in Figure 6A-6B. It is also disclosed that the programming studio transmits control signals that control operations at the ITS in terms of retransmitting the program (video) and/or messages (instruct signals). *See,* for example, 1987 Spec., P. 430, ll. 3-14.

The WSW 1981 example is similar. There, the "television studio originating the program" is the OTS. The ITS corresponds to the multi-channel cablecast system shown in Figs. 3A-3C. The claimed instruct signal corresponds to the instruction signals generated in the television studio originating the program, which are transmitted from the

television studio originating the program. *See* 1981 Spec., Col. 19, ll. 60-63. The instruction signals embedded in the program cause the generation of the local overlays at the receiver station. *See* 1981 Spec., Col. 19, ll. 48-53. The disclosure also describes how control signals can be used to control communication of programming and messages from the cablecast system (i.e., the ITS). *See* 1981 Spec., Col. 11, ll. 38-43; ll. 50-57; *see also* Figs. 3A-3C.

3. Overview of Claim Amendments

a. Independent Claim 80

Claim 80 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not used in the body of claim 80. These include a receiver, a signal detector, a processor, and an output device. Claim 80 has also been amended to remove the step of receiving video and a control signal at an origination station to focus the claim more particularly on the transmission aspects of the origination transmitter station. Claim 80 has been clarified to recite the step of "transmitting a signal from an origination transmitter to a remote intermediate transmitter station" to remove any perceived ambiguity as to the destination of the signal.

Claim 80 also has been amended to clarify that the receiver station generates and outputs a "locally generated portion of said video presentation." The amendment clarifies that the portion of the video presentation is "locally generated."

Claim 80 has been further amended to clarify that the "origination transmitter" transmits a signal having video and an instruct signal that controls operations at a receiver station. The origination transmitter also transmits a control signal that controls operations at the intermediate transmitter station. The control signal is operative at the intermediate transmitter station to control the communication of the video and/or the instruct signal at the intermediate transmitter station. The instruct signal is operative at

the receiver station to generate and/or output locally-generated video and cause the local video to be presented with the remotely-transmitted video at the receiver station.

Support for the amended claim recitation of *transmitting a signal containing video and an instruct signal* from an origination station transmitter is found in the 1987 disclosure of an instruction signal being generated at a program origination studio, being embedded in the programming transmission and transmitted. *See* 1987 Spec., P. 24, l. 34 - P. 26, l. 1. Support for the amended recitation exists in the 1981 specification's disclosure of an instruction signal being generated in the television studio originating the programming and being transmitted in the programming transmission. *See* 1981 Spec., Col. 19, ll. 60-63.

Support for the amended claim recitation of transmitting a signal containing video and an instruct signal from an origination station transmitter *to a remote intermediate transmitter station* is found in the 1987 disclosure of the signal processing apparatus that automates the operations of intermediate transmission stations receiving and retransmitting programming. *See* 1987 Spec., P. 324, ll. 8-11. Support for this amended recitation exists in the 1981 specification's disclosure of a signal processing apparatus that automates the operations of an intermediate transmission point such as a broadcast station transmitting only a single channel of programming or a cable system cablecasting many channels. *See* 1981 Spec., Col. 10, ll. 15-20.

Support for the amended claim recitation of transmitting an instruct signal which is operative at a receiver station to instruct the receiver station to generate and/or output a *locally generated* portion of a video presentation is supported by the disclosure of the microcomputer being instructed generate the graphic overlay (the microcomputer generated graphic) that forms one part of the video presentation (i.e., the microcomputer generated graphic overlaying the studio generated graphic). *See* 1987 Spec., P. 24, l. 32 - P. 25, l. 6; P. 26, ll. 4-11; 1981 Spec., Col. 19, l. 48 - Col. 20, l. 2.

Support for the amended claim recitation of *transmitting at least one control signal from an origination transmitter to a remote intermediate transmitter station* is found in the 1987 disclosure of a computer, 73, (at an intermediate transmitter station) comparing selected meter-monitoring information of SPAM message information (SPAM signals are generated at origination transmission stations or intermediate transmitter stations and embedded in programming transmissions, *see* 1987 Spec., P. 84, ll. 26-28) with information of the programming schedule received earlier from a local input, 73, or via a network, 95, in order to determine when and on what channel the intermediate transmitter station should transmit the programming. *See* 1987 Spec., P. 328, ll. 8-13. Support for this amended recitation exists in the 1981 specification's disclosure of the intermediate transmitter station comparing identification signals on the incoming programming (received from an origination station) with the programming schedule received earlier from local input or from a remote site in order to determine when and on what channel the headend facility (i.e., the intermediate transmitter station) should transmit the programming. *See* 1981 Spec., Col. 11, ll. 38-43.

Support for the amended claim recitation of transmitting at least one control signal from an origination station to a remote intermediate transmitter station *before a specific time* is found in the 1987 disclosure of comparing SPAM message information with information of the programming schedule received earlier from local input, 73, or via a network, 95, to determine *when* and on what channel the intermediate transmitter station should transmit the programming. *See* 1987 Spec., P. 328, ll. 8-13. Support for the *before a specific time* limitation exists in the 1981 specification's disclosure of input information received at the intermediate transmitter station that might indicate *when* and on which channel the headend facility should transmit each program unit to cable field distribution systems. *See* 1981 Spec., Col. 11, ll. 25-31; Col. 11, ll. 38-41.

Support for the amended claim recitation of transmitting a control signal that is effective at an intermediate transmitter station *to control communication of* a video and/or

instruct signal is found in the 1987 disclosure of a computer at the intermediate transmitter station comparing selected meter-monitoring information of SPAM message information with information of the programming schedule to determine when and on what channel the intermediate transmitter station should transmit the programming. *See* 1987 Spec., P. 328, l. 8- P. 329, l. 1. Support for the "*control communication of*" limitation exists in the 1981 specification's disclosure of the controller/computer at the intermediate transmitter station, by comparing identification signals on the programming with the programming schedule, determining when and on what channel the headend facility should transmit the programming. *See* 1981 Spec., Col. 11, ll. 38-57.

Support for the control of communication of "*at least one of said video and said instruct signal*" in the amended claim is found in the 1981 and 1987 disclosures of instruction signals being embedded in the WSW programming transmission that is sent to and received at an intermediate transmitter station. *See* 1987 Spec., P. 21, ll. 20-24 and 1981 Spec., Col. 19, ll. 42-44. In this disclosure the "instruction signals" support the "instruct signal" and the WSW programming supports the video signal.

b. Dependent Claim 81

Claim 81 has been amended to conform the antecedent basis for "said remote intermediate transmitter station" to amended claim 80.

The amended claim remains fully supported under 35 U.S.C. § 112 by the previously identified support for claim 81.

C. Independent Claim 84

1. Summary of Claim 84

Claim 84 is a transmitter method claim for a transmitter station to transmit a plurality of discrete signals that are organized at a receiver station into instructions that have specified effects at the receiver station. In claim 84, video and a first discrete signal are received and transmitted by the transmitter station. The first discrete signal operates

to allow the receiver station to create a processor instruction by organizing information from the first discrete signal with information from a second discrete signal. The processor instruction is effective at the receiver station to deliver a locally-generated image with the remotely-transmitted video. The locally-generated image is based on user specific data. The user specific data is stored at the receiver station prior to creating the processor instruction.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

Claim 84 is supported in the 1987 specification by the disclosure of the WSW 1987 example and the description of how complete instructions (or "signal units") may be transmitted in discrete pieces (or "signal words") at varying times or locations in the transmission. *See* 1987 Spec., P. 14, l. 26 - P. 15, l. 6. In the WSW 1987 example it is disclosed how a set of instructions (contained in a "second series of instructions") are transmitted with the programming from a transmitter station (e.g., the "program origination studio") (*see* 1987 Spec., P. 23, l. 25 - P. 24, l. 1) to control the receiver station to deliver a locally-generated output to be presented with the remotely-transmitted video. *See* 1987 Spec., P. 24, l. 22 - P. 26, l. 12. In the 1987 specification, it is also disclosed that such instructions can be transmitted in piecemeal fashion as discrete signals ("signal words") to be assembled or organized into complete instructions ("signal units") at the receiver station. *See* 1987 Spec., P. 14, ll. 22-35. The signal units correspond to the claimed processor instructions. Finally, in the 1987 specification it is disclosed that the TV monitor displays the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price data recorded each day at the microcomputer which is

applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20.

Claim 84 is supported in the 1981 specification in similar fashion. In the WSW 1981 example, the instruction is transmitted from the ITS to the receiver station to deliver the locally-generated overlay. The 1981 specification also discloses how such instructions can be transmitted as discrete signals to be organized and assembled into an instruction at the receiver station. *See* 1981 Spec., Col. 2, ll. 64 - 66; Col. 7, l. 36-39. The 1981 specification further discloses that the viewer sees a microcomputer generated graphic of the viewer's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the viewer's own stocks' performance is based on the closing stock prices, applicable to the stock portfolio stored on the microcomputer, that are recorded each day on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41.

3. Overview of Claim Amendments

a. Independent Claim 84

Claim 84 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not used in the body of claim 84. These include a receiver, a signal detector, a processor, and an output device.

Additionally, claim 84 was amended to recite the delivery of a locally generated image for display, "said locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction." The amendment clarifies that the locally generated image is based on user specific data stored at a receiver station prior to the organization of a processor instruction.

None of the amendments deleting language from the claim have added any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the

previously identified support for claim 84. Support for the amended claim recitation of "said locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction" is found in the 1987 disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. Support for user specific data being stored at a receiver station prior to the organization of at least one processor instruction is found in the 1987 disclosure of the microcomputer receiving particular closing price data (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the processor instructions at the receiver station can only occur after the signals constituting the processor instructions are received at the receiver station.

Similar support for "said locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction" exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the user's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the user's own stocks' performance is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. The instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-

48). The organization of the processor instructions at the receiver station can only occur after the signals constituting the processor instructions are received at the receiver station.

D. Independent Claim 93

1. Summary of Claim 93

Claim 93 is directed to a method for a receiver station to receive discrete signals that are organized into a complete instruction with a specified effect. In claim 93, the receiver station receives, detects, and passes a first discrete signal found in an information transmission to a processor. The receiver station organizes the first discrete signal with a second discrete signal into a processor instruction. The processor instruction is effective to create a locally-generated image by processing stored user specific subscriber data in order to replace a portion of a first video image. The user specific data was stored at the receiver station prior to the organizing of the processor instruction. The result is an outputted presentation of a first video image and then the locally-generated image replacing a portion of the former.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

The WSW example in the 1987 specification provides a description of the invention defined in claim 93. The 1987 specification discloses that SPAM signals can be transmitted to control specific devices at a receiver station. *See* 1987 Spec., P. 59, ll. 29-33. These signals are received and detected. *See* 1987 Spec., P. 22, ll. 19-24, P. 23, l. 35 - P. 24, l. 2. A processor organizes discrete signal words into a signal unit or complete instruction. *See* 1987 Spec., P. 14, ll. 22-25; P. 15, ll. 26-31; P. 22, ll. 23-26; P. 24, ll. 2-3. A processor instruction that results is transferred or passed within the receiver. *See* 1987 Spec., P. 15 ll. 26-31, P. 22 ll. 26-27, P. 24 ll. 3-4. The instruction is responded to (*see* 1987 Spec., P. 24, l. 5-21) and an image is generated by processing at least one user

datum (*see* 1987 Spec., P. 24, l. 22 - P. 25, l. 6, P. 26, ll. 8-9. A first video image is displayed (Figure 1B, studio graphic), followed by the locally-generated image that replaces a portion of the former (Figure 1C, combined presentation). *See* 1987 Spec., P. 25, l. 28 - P. 26, l. 11.

Claim 93 is supported in the 1981 specification in a similar fashion. In the 1981 Spec., Col. 7, l. 36 - Col. 8, l. 62, it is disclosed that a buffer/comparator or controller device assembles discrete signal words into a complete signal instruction. The 1981 specification discloses how the first video image is displayed followed by the locally-generated image. *See* 1981 Spec., Col. 19, l. 48 - Col. 20, l. 7. The generation of an image by processing at least one user specific datum (*see* 1981 Spec., Col. 3, ll. 56-60, Col. 19, ll. 35-41) is supported by the 1981 disclosure of a microcomputer generated graphic of the user's own stocks' performance (*see* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2).

3. Overview of Claim Amendments

a. Independent Claim 93

Claim 93 is amended to delete reference to the at least one control signal that is received with at least one first discrete signal and on the basis of which the at least one first discrete signal is organized with information contained in a second discrete signal at a receiver station. The previously provided support continues to demonstrate applicants' possession of the steps of manipulating the first discrete signal and the resulting processor instruction.

Claim 93 is also amended to recite "generating an image to replace only a portion of said video image by processing at least one user specific subscriber datum stored at said receiver station prior to said step of organizing based on said step of responding to said at least one processor instruction." The amendment clarifies that the image

generated is based on at least one *user specific* subscriber datum that is *stored at the receiver station prior to the organizing step.*

Support for the amended recitation of generating an image by processing at least one "user specific subscriber datum stored at said receiver station prior to said step of organizing" is disclosed in the 1987 specification. The 1987 specification teaches a "user specific subscriber datum stored at said receiver station" in the disclosure of the subscriber's stock portfolio being preprogrammed on the computer and particular closing price datum applicable to the preprogrammed portfolio being recorded each day at the microcomputer. *See* 1987 Spec., P. 449, ll. 13-20. The 1987 specification further discloses that the "user specific subscriber datum" (i.e., either the particular closing price datum or subscriber's preprogrammed portfolio) is stored at 4:30 PM each weekday or earlier. *See* 1987 Spec., P. 449, ll. 13-26. The organizing step, in which discrete signals (i.e. the disclosed "instruction signals" embedded in the WSW programming, *see* 1987 Spec., P. 21, ll. 23-24) are organized into processor instructions, cannot occur until the "instruction signals/discrete signals" are received at the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24, and specifically P. 23, l. 35 -P. 24 l. 3). Accordingly, the organizing step must occur after the user specific subscriber datum is stored at the receiver station.

Support for the amended recitation of generating an image by processing at least one "user specific subscriber datum stored at said receiver station prior to said step of organizing" is also found in the 1981 specification. "User specific subscriber datum stored at said receiver station" is supported by the 1981 disclosure of the subscriber's stock portfolio being preprogrammed on the computer and particular closing price datum applicable to the preprogrammed portfolio being recorded each day at the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. As in the 1987 disclosure, the 1981 specification discloses that the "user specific subscriber datum" (i.e., either the particular closing price datum or subscriber's preprogrammed portfolio) is stored at 4:30 PM each

weekday or earlier. *See* 1981 Spec., Col. 19, ll. 35-41. Further, the "instruction signals," which are embedded in the WSW programming and are necessary for the organizing step, are not received at the microcomputer until 8:30 PM each Friday. *See* 1981 Spec., Col. 19, ll. 42-48. Accordingly, the organizing step must occur after the user specific subscriber datum is stored at the receiver station.

b. Dependent Claim 94

Claim 94 has been amended to generically refer to a third discrete signal on the basis of which a receiver specific control signal is generated. Further, reference to the "at least one control signal" has been deleted. The recited "third discrete signal" is supported in the 1987 and 1981 specifications at P. 436, l. 9 - P. 437, l. 15 (1987 Spec.) and Col. 19, ll. 17-23 (1981 Spec.). Support for a receiver specific control signal being generated based on a third discrete signal is found in the 1987 specification at P. 445, l. 24 - P. 446, l. 1 and at P. 446, ll. 17-21. Support for a receiver specific control signal being generated based on a third discrete signal is found in the 1981 specification at Col. 19, ll. 27-29.

c. Dependent Claim 95

Claim 95 has been amended to depend from claim 94 and to specify that the step of controlling is based on the receiver specific control signal.

The previously provided support demonstrates that the step of controlling is based on receiver specific control signals at the controller 20 as described in the 1987 specification. Similar receiver specific control signals at the microcomputer 205 are described in the 1981 specification.

d. Dependent Claim 100

Claim 100 has been amended to specify that the recited "subscriber datum" is "user specific subscriber datum."

Support for the amendment in claim 100 is identified in the discussion of the amendments made to claim 93.

e. Dependent Claim 101

Claim 101 has been amended to set forth the method of claim 93, wherein each of a plurality of receiver stations stores a respective user specific subscriber datum in a file, where each said file of a particular receiver station of said plurality of receiver stations being of a format identical to the files of the others of said plurality of receiver stations containing respective subscriber data of said others of said plurality of receiver stations. Applicants claim a 1981 priority date with respect to claim 101 and support will be demonstrated only in the 1987 specification.

Support for each receiver station storing a respective user specific subscriber datum in a file of a format identical to the files of other receiver stations containing respective subscriber data is found at P. 21, ll. 5-14 and 25-31 of the 1987 specification. A microcomputer (receiver station) is disclosed that is preprogrammed to receive an input of signals and respond in a predetermined fashion to instruction signals embedded in the WSW program transmission. *See* 1987 Spec., P. 21, ll. 20-24. Other similarly configured and preprogrammed subscriber stations (i.e., receiver stations or microcomputers) that tune to the WSW program transmission and have records in their financial portfolio files holding, in identical format, information on the particular investments of the subscriber. *See* 1987 Spec., P. 21, ll. 25-31. The recited "user specific subscriber datum" corresponds to the disclosed information on the particular investments of the subscriber that is stored, in identical format, as records in the financial portfolio files of the microcomputer.

f. Dependent Claims 103, 104, 105 and 106

Claims 103, 104, 105 and 106 have been amended to generically refer to the third discrete signal on the basis of which a receiver specific control signal is processed. Further, reference to the "at least one control signal" has been deleted.

The support applicants have provided above for proposed amended claim 94 demonstrates possession of the third discrete signal recited in proposed amended claims 103, 104, 105 and 106.

E. Independent Claim 110

1. Summary of Claim 110

Claim 110 is a transmitter station claim for transmitting processor instructions effective at a receiver station. Claim 110 provides that the transmitter station receives and transmits a first discrete signal. A first processor instruction includes information organized from information in the first discrete signal and in a second discrete signal. The transmitter station also receives and transmits an additional processor instruction. The first processor instruction and the additional processor instruction operate at a receiver station. The first processor instruction programs the receiver station to be able to respond to the additional processor instruction. The additional processor instruction is for outputting a portion of a video presentation. The portion is based on user specific data stored at the receiver station prior to organizing the first processor instruction.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

Claim 110 finds support in, *inter alia*, the WSW example of the 1987 specification. For example, the WSW programming is received at a local broadcast or cablecast station from the program originating studio. The programming includes a program instruction set embedded in the WSW programming transmission to instruct the microcomputer to generate a plurality of overlays for later display upon a later command. *See* 1987 Spec., P. 24, ll. 14-20; P. 23, ll. 35 - P. 24, l. 4 (the program instruction set is the "second series of instructions"); 1987 Spec., P. 451 ll. 6-11 (program instruction set instructs computer to generate a plurality of overlays).

Such instructions are converted based on preprogrammed information to digital signals useable by the microcomputer. *See* 1987 Spec., P. 21 ll. 14-19. Upon generating the overlays, the microcomputer is programmed to be able to respond an additional instruction that causes a generated overlay to be output for display with the incoming video. *See* 1987 Spec., P. 25, l. 33 - P. 26, l. 11. This additional instruction is also included in WSW programming that is received at and transmitted from the local broadcast or cablecast station. The overlay is a microcomputer generated graphic of the subscriber's own stock portfolio performance and is, thus, based on user specific data. *See* 1987 Spec., P. 26 ll. 8-11. The claimed additional instruction is the overlay instruction (prompting the "GRAPHICS ON" command) which causes the overlay of graphic information to be displayed. *See* 1987 Spec., P. 25, l. 34 - P. 26, l. 4.

Similar support is found in the 1981 specification. The WSW programming includes embedded instruction signals to instruct the microcomputer to generate several graphic overlays for display upon a later command. *See* 1981 Spec., Col. 19, ll. 48-50. Such instructions are organized from discrete signal words. *See* 1981 Spec., Col. 7, ll. 36-39. Once the first processor causes the generation of graphic overlays, the microcomputer is then programmed to be able to respond (1981 Spec., Col. 19, ll. 45-53) to an additional instruction that causes an overlay to be transmitted to the TV set with the incoming video. *See* 1981 Spec., Col. 19, ll. 64-68. This additional instruction is also included in WSW programming (1981 Spec., Col. 19, ll. 60-67) that is received at and transmitted from the local broadcast or cablecast station operation (1981 Spec., Col. 10, ll. 40-47). The overlay is a microcomputer generated graphic of the subscriber's own stock portfolio performance and is, thus, based on user specific data. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 1.

3. Overview of Claim Amendments

a. Independent Claim 110

Claim 110 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not used in the body of claim 110. These include a receiver, a signal detector, a processor, and an output device.

This amendment deleting language from the claim has not added any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 110.

Additionally, claim 110 has been amended to change the recitation of "at least one processor instruction" to the amended recitation of "a plurality of processor instructions." Support for the amended claim recitation of "a plurality of processor instructions" is found in the 1987 specification recitation of "instruction signals" embedded in the WSW programming. *See* 1987 Spec., P. 21 ll. 20-24. The 1981 specification also recites "instruction signals" embedded in the WSW programming. *See* 1981 Spec., Col. 19 ll. 42-44. Also, referring back to Section (1) above, the summary of specification support for both the 1981 specification and 1987 specification describes a plurality of processor instructions that are processed, such as the first set of instructions that cause the generation of overlays and the second set of instructions that causes the output of generated overlays.

Claim 110 has also been amended to include the following recitation:

> said [at least one] first processor instruction is effective to program said at least one of said plurality of receiver stations to be able to respond to an additional processor instruction of said plurality of processor instructions subsequently received by said at least one of said plurality of receiver stations, said additional processor instruction being effective at said at least one of said plurality of receiver stations to [generate and] output only a portion of said video presentation

The above amendment is supported in the 1987 specification by the disclosure of the program instruction set (corresponding to the recited "first processor instruction")

embedded in the beginning of the WSW programming transmission instructing the computer to generate a plurality of overlays (*see* 1987 Spec., P. 451, ll. 7-11), which enables the processing of the subsequent instruction signal (corresponding to the recited "additional processor instruction") embedded in the WSW programming and transmitted later in the WSW program when the host says "And here is what your portfolio did." *See* 1987 Spec., P. 25, l. 33 - P. 26, l. 2. This latter, additional processor instruction causes the output of the overlay. *See* 1987 Spec., P. 26, ll. 1-11. Accordingly, the 1987 disclosure supports the first processor instruction being effective to program a receiver station to be able to respond to an additional processor instruction subsequently received by a receiver station, as set forth by the amendment.

The amended recitation discussed in the previous paragraph is similarly supported in the 1981 specification. The 1981 specification discloses instruction signals being transmitted and received at the microcomputer at the beginning of the WSW programming transmission. 1981 Spec., Col. 19, ll. 42-48. The instruction signals (corresponding to the recited "first processor instruction") transmitted at the beginning of the WSW programming transmission instruct the microcomputer to generate several graphic video overlays. 1981 Spec., Col. 19, ll. 48-53. Subsequently, an instruction signal (corresponding to the recited "additional processor instruction") is generated and transmitted when the host says "And here is what your portfolio did," instructing the microcomputer to output a graphic video overlay that was generated earlier. *See* 1981 Spec., Col. 19, l. 56 - Col. 20, l. 2. As in the 1987 specification, the processor instruction transmitted at the beginning of the WSW program is effective to program the receiver station to be able to respond to the subsequent processor instruction, as set forth in the amended claim.

Claim 110 has been further amended to include the following recitation:

> <u>said additional processor instruction being effective</u> at said at least one of said plurality of receiver stations to [generate and] output only a portion of

said video presentation, **said portion being based on user specific data stored at said at least one of said plurality of receiver stations prior to said organizing of said** [at least one] **first processor instruction, and (iii) said** [at least one] **first** processor instruction has at said at least one of said plurality of receiver stations a target processor to process data;

The above amended recitation (in bold) is supported in the 1987 specification by the disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance (i.e., the "portion" of the "video presentation") is based on particular closing price data recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. Support for user specific data being stored at a receiver station prior to the organization of at least one processor instruction is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The user specific data is thus stored prior to the organizing of the processor instructions that cause the user specific data to be used to generate the recited portion.

Similar support for amended recitation exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the user's stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the user's own stocks' performance (i.e., the "portion" of the "video presentation") is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 36-41. The instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-48). The

user specific data is thus stored prior to the organization of the processor instructions that use the user specific data to generate the recited portion.

Claim 110 has also been amended to clarify that a first discrete signal is transferred to a transmitter at a transmitter station, and that "a first information signal including said first discrete signal" is transmitted from the transmitter station. Both the 1987 and the 1981 specifications disclose "transmitting a first information signal including said first discrete signal." The WSW program in both specifications includes embedded instruction signals (i.e., information signals including a first discrete signal) that are transmitted from a studio and received at an transmitter station (e.g., at an intermediate transmitter station). *See* 1987 Spec., Figs. 6A-B; 1981 Spec., Figs. 3A-3C. The information signals are then transferred to a transmitter at the transmitter station and transmitted from the transmitter. *See* 1987 Spec., Figs. 7 and 7C; 1981 Spec., Figs. 6E-F and 6C.

Finally, claim 110 was amended to specify that an additional processor instruction is received at a transmitter station, transferred to a transmitter, and transmitted from the ITS transmitter in "a second information transmission including said additional processor instruction." In addition to the support identified in the previous paragraph, the 1987 and 1981 specifications disclose instruction signals embedded in transmissions of the WSW program that are transmitted at two distinct time periods (i.e., the beginning of the program and when the host says "And here is what your portfolio did." *See* 1987 Spec., P. 451, ll. 7-11 and P. 25, l. 33 - P. 26 l. 2; 1981 Spec., Col. 19, ll. 42-48 and Col. 19, ll. 60-63. Accordingly, both specifications support the transfer and transmitting of an "additional processor instruction" in a "a second information transmission."

b. Dependent Claims 112, 113 and 114

Dependent claim 112 was amended to conform the antecedent basis for the "first information signal" to the amendment made to claim 110. The amendment adds no new

matter to the claim, which remains fully supported by the material cited above for independent claim 110.

Dependent claim 113 was amended to remove an unnecessary limitation. Dependent claim 114 was amended to correct a minor antecedent basis defect and to remove an unnecessary limitation. These amendments add no new matter to these claims, which remain fully supported by the material cited above for independent claim 110.

F. Independent Claim 116

1. Summary of Claim 116

Claim 116 is an OTS transmitter claim for sending control signals and discrete signals that control operations at downstream ITSs and/or further downstream receiver stations. In claim 116, there is an OTS transmitter that is the focus of the claim, a separate remote ITS, and receiver stations. The OTS transmits a control signal and a first discrete signal. Either the ITS or a downstream receiver station can organize the first discrete signal with a second discrete signal in order to render a processor instruction. Accordingly, the control signal is effective at the ITS to control the communication of (i) the processor instruction (if the ITS is to assemble the instruction) or (ii) the first discrete signal (if the receiver station is to assemble the instruction). Based on the assembled processor instruction, the receiver station of displays a locally-generated image with remotely-generated video from the ITS.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

In the 1987 specification, it is disclosed in the WSW 1987 example how the OTS ("program originating studio") transmits programming and embedded signals to a downstream transmitter station (e.g., the ITS of Figures 6A and 6B), which processes

such programming and embedded signals before transmission on to receiver stations (*see* Figures 7 and 7C). Regarding organization of discrete signals into processor instructions at receiver stations, at P. 30 of the 1987 specification it is disclosed that the buffer/comparator at the receiver station organizes received signals. *See* also the 1987 specification at P. 14, lines 22-35, which discusses the transmission of discrete units ("signal words") then organized into complete instructions ("signal units") at a receiver station. Regarding organization of discrete signals into processor instructions at the downstream ITS, at P. 430 line 33 through P. 434 line 1 of the 1987 specification it is disclosed how the ITS may organize discrete signals received from the OTS into processor instructions that are then further transmitted to receiver stations. Regarding the control signal, at P. 430 line 33 through P. 431 line 6, P. 431 lines 15-16 and P. 434 lines 2-6 of the 1987 specification it is disclosed how a message transmitted from the OTS is effective at the ITS to control communications of signals from the ITS of Figures 6A and 6B. For example, pages 430-431 and 434 describe how the OTS transmits an "intermediate-station-control message" that will cause the ITS to transmit a series of locally assembled messages to the receiver stations. The "intermediate-station-control message" is an example of the recited control signal that is transmitted by the OTS and that controls further communication of signals from the ITS to receiver stations, as set forth in amended claim 116. Pages 435-447 disclose the receiver stations being controlled based on the messages (*see* 1987 Spec., P. 435, ll. 16-25) to receive a cable channel (*see* 1987 Spec., P. 439, ll. 9-15) containing the Wall Street Week program (*see* 1987 P. 430, ll. 16-27) and to display their locally generated images in conjunction with video received from the ITS (*see* 1987 Spec., P. 447, ll. 11-14 and P. 26, ll. 8-11 in pages 19-28). The "intermediate-station-control message" also causes the ITS to communicate the information transmitted from the OTS (*see* 1987 Spec., P. 434, l. 34 - P. 435, l. 15) including a discrete signal (*see* 1987 Spec., P. 443, ll. 1-6) which causes input of the Wall Street Week program transmission to microcomputers at the receiver stations (*see* 1987

Spec., P. 443, l. 19 - P. 444, l. 11) which also enables them to display their local images with the ITS supplied video.

Regarding the 1981 specification, it is disclosed in the WSW 1981 example that the OTS (program originating studio) transmits programming and embedded signals to a downstream ITS station (*See* Figs. 3A-3C) that then transmits to receiver stations (*see* Figures 6E-F and 6C). Support in the text is found in the 1981 Spec., Col. 10, l. 61, et seq., which describes how incoming programming and signals ("instruction and information signals") transmitted from an OTS are received at an ITS, which processes same prior to transmission to further downstream receiver stations. Regarding organization of discrete signals into processor instructions at receiver stations, the 1981 specification discusses how discrete signals can be organized into whole instructions at receiver stations. *See* 1981 Spec., Col. 2, ll. 64-66; Col. 7, l. 36 - Col. 8, l. 39; Figure 1. Regarding organization of discrete signals into processor instructions at downstream transmitter (ITS) stations, Figures 3A-3C disclose how embedded discrete signals from the OTS can be detected and organized (e.g., by signal processor 71 of Figure 3A) at the ITS into instructions then transmitted to receiver stations. For example, the 1981 Spec. at Col. 12, ll. 13-21 describes how the ITS includes a computer 73 for monitoring and controlling the operation of various decoders that detect embedded signals that are then organized into instructions. For example, Figure 3A (*see* the supporting text in Col. 11-12) shows how the various programming inputs to signal processor 71 will be processed to detect embedded signals contained therein to be organized into instructions as per Figure 1. Regarding the control signal, the 1981 specification describes that a control signal from the OTS can control communication of signals from the ITS. For example, Col. 11, ll. 3-14, 38-44 and 50-57 describes that identification control signals received from the OTS control the ITS regarding its further transmission of received programming/instructions to receiver stations. As described in the 1981 Spec., Col., 11, ll. 3-14, the ITS may be controlled in its transmission of "instructions and information

signals" and the associated programming to the receiver stations. Moreover, as described in the 1981 Spec., Col. 12, ll. 36-48, the ITS may be controlled in its insertion of signals (e.g., instruct signals assembled at the ITS) into the transmissions by "signal generators" before transmitting on to the receiver stations. Thus, the channel identification signals are one example of a control signal transmitted by the OTS that controls the ITS regarding communication of discrete signals (i.e., to be assembled into instructions at receiver stations in accordance with Figure 1) or instructions (i.e., assembled into instructions by the ITS in accordance with Figures 3A and 3B) to be communicated to receiver stations. Column 19, l. 12 through col. 20, l. 2 discloses how the signals transmitted from the OTS (*see* 1981 Spec., Col. 19, ll. 14-15) cause the receiver station to receive Wall Street Week (*see* 1981 Spec. Col. 19, ll. 20-25) and input it to the microcomputer (*see, e.g.,* 1981 Spec., Col. 19, ll. 45-53) enabling display of a local image with video supplied from the ITS (*see* 1981 Spec., Col. 19, l. 53 - Col. 20, l. 2).

3. Overview of Claim Amendments

a. Independent Claim 116

Claim 116 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not used in the body of claim 116. These include a receiver, a signal detector, a processor, and an output device. This amendment deleting language from the claim has not added any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 116.

Claim 116 has been amended to set forth that the recited functions at the receiver station are based on at least one processor instruction. This amendment broadens the claim from the prior recitation of the functions being in response to the at least one processor instruction.

Claim 116 has been amended to remove the step of receiving video and a control signal at an origination station to focus the claim more particularly on the transmission aspects of the origination transmitter station. Further, claim 116 was amended to clarify that information transmitted from an origination station is received at a remote "intermediate" transmitter station, and that information is then transmitted from a remote "intermediate" transmitter station to be received at a receiver station.

Finally, claim 116 has been amended to clarify the steps involving the control of communications at the ITS and the organizing of the processor instruction. In particular, claim 116 has been amended to clarify that the organization of the processor instruction can take place at either the ITS or the receiver station. If the processor instruction is organized at the ITS, the control signal will control communication of the processor instruction to the receiver station. If the processor instruction is organized at the receiver station, the control signal will control the communication of the first discrete signal to the receiver station.

This amendment can be summarized as follows:

> when the organization takes place at the intermediate transmitter station the control signal controls the communication of the processor instruction at the ITS; and
>
> when the organization takes place at the receiver station, the control signal controls the communication of the first discrete signal at the ITS.

In making the amendments described above to clarify claim 116, no new matter has been added to the claim (the claim has merely been reorganized to more clearly set forth the two scenarios), and, accordingly, the amended claim remains fully supported under 35 U.S.C. § 112 by the previously identified support for claim 116.

b. Dependent Claim 117

Claim 117 has been amended to specify that the video image is received at a "remote intermediate" transmitter station and conform the antecedent basis for "said remote intermediate transmitter station" to amended claim 116.

The amended claim remains fully supported under 35 U.S.C. § 112 by the previously identified support for claim 117 and the previously identified support for claim 116.

G. Independent Claim 123

1. Summary of Claim 123

Claim 123 is a transmitter claim for controlling operations at a receiver station by sending pieces of information that will allow an instruct signal to be effective at a receiver station to generate a second image of a video presentation. The second image is based on user specific data stored at the receiver station. The instruct signal requires an identifier (ID) that identifies the second image. Accordingly, a transmitter station receives and transmits downstream the instruct signal, a first discrete signal, and a control signal. The control signal is operative at a receiver station to allow partial information of the ID in the first discrete signal to be organized with information from a second discrete signal, rendering the ID. This ID designates the second image to be delivered in conjunction with a first image in accordance with the instruct signal. The user specific data upon which the second image is based was stored prior to organizing the ID.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

The support for transmitter stations controlling receiver stations using control signals and discrete signals, and for the generation of combined presentations of remotely-generated first images with locally-generated second images, has been discussed above for both the 1987 specification and the 1981 specification.

The discrete signal including only partial information of an identifier, is supported in the 1987 Spec. at P. 14, l. 33 - P. 15, l. 2, as "one full discrete appearance of a signal as embedded at one time in one location on a transmission." The 1981 Spec. at Col. 3, ll. 3-8 discloses the same concept.

The control signal (*see generally* 1987 Spec., P. 59, ll. 29-33) operates to provide the identifier by organizing the discrete signal's partial information of the identifier with information from a second discrete signal. This control signal is supported as organizing information to create a complete identifier in the 1987 Spec. generally at P. 14, l. 24 through P. 15, l. 2 and P. 15, ll. 26-28 describing the that processor/monitor and/or buffer/comparator organize and transfer the information stream. 1987 Spec., P. 21, l. 14-19, P. 94, l. 10-14. The 1981 Spec. at Col. 7, ll. 36-39 describes buffer/comparator 8 organizing the data stream by assembling signal units from signal words. 1981 Spec., Col. 19, ll. 17-20.

The organized identifier then designates a second image (the first overlay) at the receiver station which image is based on user specific data stored at the receiver station (*e.g.* stock prices) prior to organizing the identifier, and operates to cause the instruct signal to generate and output the second image for display in conjunction with the first image. *See* in generally 1987 Spec., P. 452, l. 26 - P. 453, l. 1 and in specific P. 124, ll. 16-30; P. 125, ll. 10-20 and P. 125, l. 31 - P. 126, l. 1 based on data stored at P. 449, l. 13-25; 1981 Spec., Col. 19, ll. 64-66 resulting in an image at Col. 19,l. 67 - Col. 20, l. 2 based on data stored at Col. 19, ll. 35-41.

3. Overview of Claim Amendments

a. Independent Claim 123

Claim 123 has been amended to remove the following bracketed information:

"a plurality of receiver stations, [each of which includes a receiver, a signal detector, a processor, and an output device]"

"wherein said video presentation includes a first image which is received at said at least one of said plurality of receiver stations from a [first] remote transmitter station, and wherein [one of a code and] an identifier is operative at said at least one of said plurality of receiver stations to designate [one of] a second image [and a device] . . ."

"receiving at [at least one of] said [first] remote transmitter station [and a second remote transmitter station] at least one instruct signal [which is effective at said at least one of said plurality of receiver stations to generate locally and output said second image of said video presentation for delivery in conjunction with said first image];"

"receiving . . . [at least one of said first] remote transmitter station [and said second remote transmitter station], said at least one first discrete signal including only partial information of said [one of a code and an] identifier and said at least one control signal operative to provide said [one of a code and an] identifier and designate at said at least one of said plurality of receiver stations by organizing said partial information with information contained in a second discrete signal at said at least one of said plurality of receiver stations, wherein said [one of a code and an] identifier designates said [one of said] second image [and said device] . . ."

The above-described amendments were made to clarify the claim by removing the limitations directed to a second transmitter station. None of the amendments deleting language from the claim have added any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 123.

Claim 123 has also been amended to add the following recitation:

. . . at least one instruct signal to be effective at said at least one of said plurality of receiver stations <u>to generate and output said second image of said video presentation for delivery in conjunction with said first image, wherein said second image is based on user specific data stored at said at least one of said plurality of receiver stations prior to said organizing of said identifier</u>;

The amendment is fully supported in both specifications. Support is found in the 1987 disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance (i.e., the output of the "second image") overlaying the studio generated graphic (i.e., the "first image"). *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the

stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. Support for user specific data being stored at at least one receiver station prior to the organization of the identifier is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the identifier at the receiver station can only occur after the signals constituting the identifier are received at the receiver station.

Similar support for the amendment exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the user's stocks' performance (i.e., the output of the "second image") overlaying the studio generated graphic (i.e., the first image). *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the user's stocks' performance is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. The identifiers are embedded in the WSW programming transmission, which are transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-48 and 63-67). The organization of the identifier at the receiver station can only occur after the signals constituting the identifier are received at the receiver station.

Finally, the amendment directed to "at least one of said plurality of receiver stations" at the very end of the claim does not add any new matter and the portion of the claim remains fully supported in both specifications by the support previously identified for claim 123.

b. Dependent Claim 124

Claim 124 has been amended to remove the following bracketed information:

"receiving said video image at said [at least one of said first remote transmitter station and a second] remote transmitter station;"

The above-described amendment was made to clarify the claim and remove the limitation directed to a second transmitter station.

The amendment deleting language from the claim did not add any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 124.

c. Dependent Claim 127

Claim 127 has been amended to set forth the method of claim 123 and the additional the step of transmitting data that enable said at least one of said plurality of receiver stations to determine that said second image is complete. Applicants claim a 1981 priority date with respect to claim 127 and support will be demonstrated only in the 1987 specification.

Support for the step of transmitting such data is found in the 1987 specification's disclosure of a second series of instructions being embedded in WSW programming and transmitted. *See* 1987 Spec., P. 23, l. 35 - P. 24, l. 1. Such instructions are comprised of a string of one or more digital data bits encoded together on a single line of video or sequentially in audio. *See* 1987 Spec., P. 14, l. 35 - P. 15, l. 2. Such instructions contain information of the identity of the overlay. At P. 107, lines 20-33, the 1987 specification states that, following completion of the Fig. 1A image, the program instruction set places "00000001" at memory signifying that the image represents the first overlay. Support for the transmitted data enabling a receiver stations to determine that said second image is complete is found in the disclosure of a SPAM message causing the combining of images resulting in an overlay only at a subscriber station where information exists of the completion of the identified overlay. *See* 1987 Spec., P. 452, ll. 24-30. The 1987 specification specifically discloses the generation of an image at receiver station, in which the SPAM controller compares information in the microcomputer's memory. *See*

1987 Spec., P. 124, ll. 25-28. The comparison produces a match, thus indicating that the microcomputer has completed placing appropriate Fig. 1A image (i.e., the locally generated image) at video RAM. *See* 1987 Spec., P. 124, ll. 28-30.

H. Independent Claim 162

1. Summary of Claim 162

Claim 162 is a transmitter station claim for controlling operations at a receiver station by transmitting discrete signals that are organized so as to enable code to be processed at the receiver station. In claim 162, a video image and a first discrete signal are received and transmitted by the transmitter station. At the receiver station, the first discrete signal is organized with a second discrete signal in order to provide the code, wherein the code enables the receiver station to be able to identify a locally generated image and output the locally generated image with a remotely transmitted image. The locally generated image is based on user specific data stored at the receiver station prior to organizing the code.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

Claim 162 is supported in the 1987 specification by the disclosure of the WSW 1987 example and the description of how complete instructions (*e.g.* "signal units") may be transmitted in discrete pieces (*e.g.* "signal words"). *See* 1987 Spec., P. 14 ll. 22-25. In the WSW 1987 example it is disclosed how video and instructions ("second series of instructions") are transmitted control the receiver station to deliver a locally-generated output to be presented with the remotely-transmitted video. *See* 1987 Spec., P. 21, l. 35 - P. 22, l. 1; P. 25, ll. 23-33; P. 23, l. 35 - P. 24, l. 7; P. 25, l. 34 - P. 26, l. 1. In the 1987 specification, it is also disclosed that such instructions can be transmitted in piecemeal fashion as discrete units ("signal words") to be assembled or organized into complete

instructions ("signal units"). *See* 1987 Spec., P. 14, ll. 22-35. Finally, in the 1987 specification it is disclosed that the TV monitor displays the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20.

Claim 162 is supported in the 1981 specification in similar fashion. In the WSW 1981 example, the instruction is transmitted from the OTS to the receiver station to deliver the locally-generated overlay. The 1981 specification also discloses how such instructions can be transmitted as discrete signals to be organized and assembled into an instruction at the receiver station. *See* 1981 Spec., Col. 2, ll. 64 - 66; Col. 7, l. 36 - Col. 8, l. 39. The 1981 specification further discloses that the viewer sees a microcomputer generated graphic of the viewer's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the viewer's own stocks' performance is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each day on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41.

The 1987 specification supports the recitation of providing code which enables the receiver station to be able to identify a locally generated image (*see* 1987 Spec., P. 452, ll. 24-30) and output the locally generated image with a remotely transmitted image (*see* 1987 Spec., P. 490, l. 35 - 491, l. 16). The 1987 specification discloses the program instruction set instructing the microcomputer to generate a plurality of overlays. *See* 1987 Spec., P. 451, ll. 6-11. The SPAM messages causing the combining of a locally generated overlay with a remotely transmitted image in which the SPAM message specifies the identity of the particular overlay to be combined with the remotely transmitted image. *See* 1987 Spec., P. 452, ll. 24-30. The code that is provided to enable

the receiver station to be able to identify and output a locally generated image is disclosed in the 1981 specification's disclosure of embedded instruct signals which cause the microcomputer to generate several graphic overlays, and then identify and output the first overlay to the TV set. *See* 1981 Spec., Col. 19, ll. 42-44; 48-53; 64-67.

3. Overview of Claim Amendments

a. Independent Claim 162

Claim 162 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not used in the body of claim 162. These include a receiver, a signal detector, a processor, and an output device.

Claim 162 is also amended to recite "said code comprised of information contained in [each] at least two of said plurality of discrete signals . . ." The claim is further amended to recite the first discrete signal being "organized" with a second discrete signal. These amendments do not add any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 162.

Claim 162 has also been amended to clarify that information in a first discrete signal is organized with information in a second discrete signal "to provide said code" and wherein said code enables a receiver station to "be able to" identify a "locally generated" image and output the "locally generated" image in conjunction with the video image, the "locally generated image being based on user specific data stored at said at least one receiver station prior to said organizing of said code." The amendment concerning information in a first discrete signal being organized with information in a second discrete signal *to provide said code* to enable a receiver station *to be able to identify a locally generated* image is supported in the 1987 specification by SPAM messages (the recited code) causing the combining of a locally generated overlay with a remotely transmitted image in which the SPAM message specifies the identity of the

particular overlay to be combined with the remotely transmitted image. *See* 1987 Spec., P. 452, ll. 24-30. This amended recitation is disclosed in the 1981 specification's description of embedded instruct signals which cause the microcomputer to generate several graphic overlays and then identify and output the first overlay to the TV set. *See* 1981 Spec., Col. 19, ll. 42-44; 48-53; 64-67.

Support for *user specific data being stored at a receiver station prior to the organization* of the code is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (code) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the code at the receiver station can only occur after the signals constituting the code are received at the receiver station. Similar support for this amended recitation exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the viewer's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the viewer's own stocks' performance (i.e., the "portion" of the "video presentation") is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. The instruction signals (code) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-48). The organization of the code at the receiver station can only occur after the signals constituting the code are received at the receiver station.

I. Independent Claim 167

1. Summary of Claim 167

In claim 167, the receiver station receives a first discrete signal and a first video graphic image. The remotely-transmitted first video graphic image is output at a video monitor. Based on a control signal, the receiver station organizes the first discrete signal with a second discrete signal into a processor instruction. The processor instruction is effective to cause a portion of a locally generated second image to be output to the video monitor. The portion is based on user specific data stored at the receiver station prior to the organizing of the processor instruction. The result is an outputted presentation of a complete second image including the locally generated portion and a portion of the first video graphic image.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

The WSW 1987 example discloses that SPAM signals can be transmitted to control specific devices at a receiver station. A first image is received and displayed. *See* 1987 Spec., P. 25, ll. 23-33 and Fig. 1B. A processor organizes discrete signal words into a signal unit or complete instruction. *See* 1987 Spec., P. 14, ll. 22-25; P. 15, ll. 26-31; P. 22, ll. 23-26; P. 24, ll. 2-3. The processor instruction that results is disclosed in the WSW 1987 example (*see* 1987 Spec., P. 26, ll. 1-8) whereby the instruction causes a locally-generated image that replaces a portion of the former image to be displayed (Figure 1C, combined presentation). The step of generating an image by processing user specific data stored at a receiver station prior to organizing the processor instruction is supported by the 1987 disclosure of a microcomputer generated graphic of the subscriber's own portfolio performance. *See* 1987 Spec., P. 26, ll. 8-11.

Claim 167 is supported in the 1981 specification in a similar fashion. The control signal from which discrete signals are organized into processor instructions is disclosed

generally in the 1981 Spec. at Col. 7, ll. 36-39 and Col. 8, ll. 32-39 and more specifically at Col. 19, ll. 17-20 and 60-67. There it is disclosed how control information is used by a buffer/comparator or controller device in order to assemble discrete signal words into a complete signal instruction. The 1981 specification discloses how the first video image is displayed followed by the locally-generated image. *See* 1981 Spec., Col. 19, l. 48 - Col. 20, l. 2. The generation of an image by processing user specific data stored at the receiver station prior to organizing the processor instruction is supported by the 1981 disclosure of a microcomputer generated graphic of the viewer's own stocks' performance. *See* 1981 Spec., Col. 19, ll. 35-41; Col. 19, l. 67 - Col. 20, l. 2.

3. Overview of Claim Amendments

a. Independent Claim 167

Claim 167 has been amended to delete the modifier "downloadable" when referring to the code. Applicants address the Examiner's concerns regarding the term downloadable below and maintain that the previously provided support demonstrates possession of code that functions as set forth in claim 167.

The "passing" step in claim 167 has been amended to recite "passing . . . only a portion of a <u>locally generated</u> second completed full-screen video graphic image, <u>wherein said only a portion of said locally generated second completed full-screen video graphic image is based on user specific data stored at said receiver station prior to said step of organizing</u> . . ."

Support for this amendment exists in the 1987 disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. The

graphic of the subscriber's own portfolio performance is only a portion of the full screen video image. The subscriber specific graphic is overlaid on the studio generated graphic depicting the performance of the overall (i.e., Dow Jones Industrial Average) stock market performance and the combined overlay is the completed full-screen video graphic image. Accordingly, the graphic of the subscriber's own portfolio performance is only a "portion" of the "locally generated second completed full-screen video graphic image."

Support for user specific data being stored at a receiver station prior to the organization of at least one processor instruction is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the processor instructions at the receiver station can only occur after the signals constituting the processor instructions are received at the receiver station.

Similar support for the amendment exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the viewer's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the viewer's own stocks' performance is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. As noted, the graphic of the subscriber's own stocks' performance is only a "portion" of the "locally generated second completed full-screen video graphic image." Also, the instruction signals (processor instructions) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-48). The organization of the processor instructions

at the receiver station can only occur after the signals constituting the processor instructions are received at the receiver station.

J. Independent Claim 171

1. Summary of Claim 171

In claim 171, a transmitter station transmits a control signal and a first discrete signal. At a receiver station, the control signal causes the first discrete signal and a second discrete signal to be organized into a processor instruction. The processor instruction is effective at the receiver station to cause a portion of a second graphic image to be displayed with a portion of a first graphics image, thereby rendering a complete second graphic image. The portion of the second graphic image is based on user specific data stored at the receiver station.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

The 1987 specification discloses that SPAM control signals can be transmitted to control specific devices at a receiver station, such as a processor organizing discrete signal words into a signal unit or complete instruction. *See* 1987 Spec., P. 22, ll. 1-3; P. 59, ll. 29-33; P. 163, l. 29; P. 181, ll. 24-25. A first video image is displayed. *See* 1987 Spec., P. 25, ll. 23-33. The claimed processor instruction that results from the organizing is disclosed in the WSW 1987 example whereby the instruction causes the display of a locally-generated image that replaces a portion of the first video image to display the second video image (Figure 1C, combined presentation). *See* 1987 Spec., P. 26, ll. 1-11. The step of generating an image by processing user specific data is supported by the 1987 disclosure of a microcomputer generated graphic of the subscriber's own portfolio performance based on earlier delivered and stored stock price data. *See* 1987 Spec., P. 26, ll. 8-11; P. 449, ll. 13-26.

Claim 171 is supported in the 1981 specification in a similar fashion, whereby discrete signals are organized into processor instructions is disclosed generally in the 1981 specification at Col. 7, l. 36 - Col. 8, l. 62, and more specifically at Col. 19., ll. 17-20, 60-67. There it is disclosed how control information is used by a buffer/comparator or controller device in order to assemble discrete signal words into a complete signal instruction. The 1981 specification discloses how the first video image is displayed and followed by the locally-generated image. *See* 1981 Spec., Col. 19, l. 48 - Col. 20, l. 7. The generation of an image by processing at least one user specific datum is supported by the 1981 disclosure of a microcomputer generated graphic of the viewer's own stocks' performance based on earlier delivered and stored stock price data. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2; Col. 19, ll. 35-41.

3. Overview of Claim Amendments

a. Independent Claim 171

Claim 171 has been amended to recite a "method of delivering a video graphic presentation comprising a first completed full-screen video graphic image and a second completed full-screen video graphic image at least one receiver station of a plurality of receiver stations, wherein each of said plurality of receiver stations (a) includes . . ." The amendment clarifies that the video graphic presentation is comprised of the first and second completed full-screen video graphic image.

Claim 171 has also been amended for clarity to recite that the video graphic presentation is comprised of a first and second completed full-screen video graphic image at the beginning of the claim. Finally, in the receiving step, the clause "[and serves as a basis for providing said at least one processor instruction at said at least one receiver station]" has been deleted.

Support for the amended claim recitation of "a video graphic presentation comprising a first completed full-screen video graphic image and a second completed

full-screen video graphic image" is found in the 1987 disclosure of the TV monitor displaying the image of FIG 1C (the second completed full-screen video graphic image), which is the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic (the first completed full-screen video graphic image). 1987 Spec., P.26, ll. 8-11. The recitation is supported by the 1981 disclosure of the depiction of a studio generated graphic (the first completed full-screen video graphic image) displayed at the TV set, 1981 Spec., Col. 19, ll. 48-56, and the disclosure of a viewer seeing a microcomputer generated graphic of the viewer's own stock performance overlaying the studio generated graphic (the combined images being the second completed full-screen video graphic image) , 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2.

Claim 171 has also been amended to specify that "only a portion of said second completed full-screen video graphic image is based on user specific data stored at said at least one receiver station prior to said organizing of said at least one processor instruction."

Support for this amendment exists in the 1987 disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. The graphic of the subscriber's own portfolio performance is only a portion of the full screen video image. The subscriber specific graphic is overlaid on the studio generated graphic depicting the performance of the overall (i.e., Dow Jones Industrial Average) stock market performance and the combined overlay is the completed full-screen video graphic image. Accordingly, the graphic of the subscriber's own portfolio performance is only a "portion" of the "locally generated second completed full-screen video graphic image."

Support for user specific data being stored at a receiver station prior to the organization of at least one processor instruction is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (the claimed discrete signals) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the signals into processor instructions at the receiver station can only occur after the signals constituting the processor instructions are received at the receiver station.

Similar support for the amendment exists in the 1981 specification. The 1981 specification discloses a microcomputer generated graphic of the viewer's own stocks' performance overlaying the studio generated graphic. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2. The graphic of the viewer's own stocks' performance is based on the closing stock prices applicable to the stock portfolio stored on the microcomputer that are recorded each weekday at 4:30 PM on the microcomputer. *See* 1981 Spec., Col. 19, ll. 35-41. As noted, the graphic of the subscriber's own stocks' performance is only a "portion" of the "locally generated second completed full-screen video graphic image." Also, the instruction signals (the claimed discrete signals) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1981 Spec., Col. 19, ll. 42-48). The organization of the signals into processor instructions at the receiver station can only occur after the processor instructions are received at the receiver station.

The other amendments to claim 171, including all of the deleted language, do not add any new matter to the claim, and the claim remains supported under 35 U.S.C. § 112 by the previously identified support for claim 171.

K. Independent Claim 175

1. Summary of Claim 175

Claim 175 is an OTS transmitter claim directed to controlling operations at downstream ITS and further downstream receiver stations. In claim 175, a first video graphic image, a first discrete signal, and a control signal are transmitted from the OTS transmitter to the ITS. In claim 175, either the ITS or a downstream receiver station can organize the first discrete signal with a second discrete signal in order to render the processor instruction. Accordingly, claim 175 provides that the control signal is effective at the ITS to control the communication of (1) the processor instruction (if the ITS is to assemble the instruction) and the first video graphics image, or (2) the first discrete signal (if the receiver station is to assemble the instruction) and the first video graphics image. Based on the assembled processor instruction, a portion of a second graphic image is displayed with a portion of a first graphics image, rendering a complete second graphic image.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

In the 1987 specification, it is disclosed in the WSW 1987 example how the OTS ("program originating studio") transmits programming and embedded signals to a downstream transmitter station (e.g., the ITS of Figures 6A and 6B), which processes such programming and embedded signals before transmission on to receiver stations (*see* Figures 7 and 7C). Regarding organization of discrete signals into processor instructions at receiver stations, at P. 30 of the 1987 specification it is disclosed that the buffer/comparator at the receiver station organizes received signals. The 1987 specification at P. 14, lines 22-35, discusses the transmission of discrete units ("signal words") which are then organized into complete instructions ("signal units") at a receiver station. Regarding organization of discrete signals into processor instructions at the

downstream ITS, at P. 430 line 33 through P. 434 line 1 of the 1987 specification it is disclosed how the ITS may organize discrete signals received from the OTS into processor instructions that are then further transmitted to receiver stations. Regarding the control signal, at pages 430 line 33 through P. 431 line 6, P. 432 lines 15-16 and P. 434 lines 2-6 of the 1987 specification it is disclosed how a message transmitted from the OTS is effective at the ITS to control communications of signals from the ITS of Figures 6A and 6B. For example, pages 430-431 and 434 describe how the OTS transmits an "intermediate-station-control message" that will cause the ITS to transmit a series of messages to the receiver stations. The "intermediate-station-control message" is an example of the recited control signal that is transmitted by the OTS and that controls further communication of signals from the ITS to receiver stations, as set forth in amended claim 116.

The support for the processor instruction is found in the disclosure of the messages (*see* 1987 Spec., P. 439, ll. 16-25) to receive a cable channel (*see* 1987 Spec., P. 439, ll. 9-15) containing the "Wall Street Week" program (*see* 1987 Spec., P. 430, ll. 16-27) and to generate and display the graphic image of the performance of the subscriber's stock portfolio. *See* 1987 Spec., P. 447, ll. 11-14, P. 24, ll. 22-27, and P. 26, ll. 1-8. The combined image of the performance of the subscriber's stock portfolio (Fig. 1A) is combined with the image of what the Dow Jones Industrials Average did (Fig. 1B) to form a completed image that fills the entire screen (Fig. 1C). *See* 1987 Spec., P. 25, l. 9 - P. 26, l. 19. The "intermediate-station-control message" also causes the ITS to communicate the information transmitted from the OTS (*see* 1987 Spec., P. 434, l. 34 - P. 435, l. 15) including a discrete signal (*see* 1987 Spec., P. 443, ll. 1-6) which causes input of the "Wall Street Week" program transmission to microcomputers at the receiver stations (*see* P. 443, l. 19 - P. 444, l. 11) which also enables them to display their local images with the ITS supplied video.

Regarding the 1981 specification, it is disclosed in the WSW 1981 example that the OTS (program originating studio) transmits programming and embedded signals to a downstream ITS (*see* Figs. 3A-3C) that then transmits to receiver stations (*see* Figures 6E-F and 6C). Support in the text is found in the 1981 Spec., Col. 10, l. 61 - Col. 11, l. 11, which describes how incoming programming and signals ("instruction and information signals") transmitted from an OTS are received at an ITS, which processes same prior to transmission to further downstream receiver stations. Regarding organization of discrete signals into processor instructions at receiver stations, the 1981 specification discusses how discrete signals can be organized into whole instructions at receiver stations. *See* 1981 Spec., Col. 2, ll. 64-66; Col. 7, l. 36 - Col. 8, l. 39; Figure 1. Regarding organization of discrete signals into processor instructions at downstream transmitter (ITS) stations, Figures 3A-3C disclose how embedded discrete signals from the OTS can be detected and organized (e.g., by signal processor 71 of Figure 3A) at the ITS into instructions then transmitted to receiver stations. For example, the 1981 Spec. at Col. 12, lines 13-21 describes how the ITS includes a computer 73 for monitoring and controlling the operation of various decoders that detect embedded signals that are then organized into instructions. For example, Figure 3A (*see* the supporting text in Col. 11-12) shows how the various programming inputs to signal processor 71 will be processed to detect embedded signals contained therein to be organized into instructions as per Figure 1. Regarding the control signal, the 1981 specification describes that a control signal from the OTS can control communication of signals from the ITS. For example, Col. 11, ll. 3-14, ll. 38-44 and 50-57 describes that channel identification control signals received from the OTS control the ITS regarding its further transmission of received programming/instructions to receiver stations. As described in the 1981 Spec., Col. 11, ll. 3-14, the ITS may be controlled in its transmission of "instructions and information signals" and the associated programming to the receiver stations. Moreover, as described in the 1981 Spec., Col. 12, ll. 36-48, the ITS may be controlled in its insertion of signals

(e.g., instruct signals assembled at the ITS) into the transmissions by "signal generators" before transmitting on to the receiver stations. Thus, the channel identification signals are one example of a control signal transmitted by the OTS that controls the ITS regarding communication of discrete signals (i.e., to be assembled into instructions at receiver stations in accordance with Figure 1) or instructions (i.e., assembled into instructions by the ITS in accordance with Figures 3A and 3B) to be communicated to receiver stations.

The support for the receiver station to generating and outputting only a portion of a second completed full-screen video graphic image based on a processor instruction is found in disclosure of signals transmitted from the OTS (*see* 1981 Spec., Col. 19, ll. 14-15) that cause the receiver station to receive the "Wall Street Week" program (*see* 1987 Spec., Col. 19, ll. 10-25) and input it to the microcomputer (*see, e.g.* 1981 Spec., Col. 19 ll. 45-53) enabling the generation and display of a local image with video supplied from the ITS (*see* 1981 Spec., Col. 19, l. 53 - Col. 20, l. 2). The combined image of the viewer's own stocks' performance overlaying studio generated graphic of what the Dow Jones Industrials Average did forms a completed image. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 1. The studio generated image is included in the WSW programming transmitted through the ITS. *See* 1981 Spec., Col. 10, l. 61 - Col. 11, l. 11.

3. Overview of Claim Amendments

a. Independent Claim 175

Claim 175 has been amended to remove certain unnecessary structural features of the receiver station from the preamble that are not referred to in the body of the claim. Claim 175 has also been amended to remove the step of "receiving" a first completed full-screen video graphic image at the origination transmitter station to focus the claim more particularly on the transmission aspects of the origination transmitter station. The amendment clarifies that the primary function of the origination station is transmitting to

an intermediate station. Claim 175 is amended in a similar manner to set forth transmitting "at least one discrete signal" from the origination station to the intermediate station.

Claim 175 has been amended to set forth that the recited functions at the receiver station are based on at least one processor instruction. This amendment broadens the claim from the prior recitation of the processor instruction instructing the receiver station to perform the functions.

Claim 175 is also amended to specifically recite "at least one discrete signal that contains information comprising only a part of at least one processor instruction, wherein said at least one processor instruction is organized from information contained in said at least one discrete signal with information contained in a second discrete signal, wherein said at least one processor instruction . . ."

Finally, claim 175 has been amended to clarify the steps involving the control of communications at the ITS and the organizing of the processor instruction. In particular, claim 175 has been amended to clarify that the organization of the processor instruction can take place at either the ITS or the receiver station. If the processor instruction is to be organized at the ITS, the control signal will control communication of the processor instruction to the receiver station. If the processor instruction is to be organized at the receiver station, the control signal will control the communication of the first discrete signal to the receiver station.

This amendment can be summarized as follows:

> when the organization takes place at the intermediate transmitter station the control signal controls the communication of the processor instruction at the ITS; and
>
> when the organization takes place at the receiver station, the control signal controls the communication of the first discrete signal at the ITS.

The amendments to claim 175 clarify the claim and do not add any new matter. Accordingly, the amended claim 175 remains fully supported by the § 112, first paragraph, support applicants have previously provided for claim 175.

L. Independent Claim 179

1. Summary of Claim 179

Claim 179 is a receiver station claim that is similar to claim 167. In claim 179, the receiver station receives a first discrete signal and a series of video images including a first video graphic image. The series of video images, including the remotely-transmitted first video graphic image, is displayed at a video monitor. Based on a control signal, the receiver station organizes the first discrete signal with a second discrete signal into a processor instruction. The processor instruction is effective to cause a portion of a locally generated second image to be output to the video monitor. The portion of the locally generated second image is based on user specific data stored at the receiver station. The result is an outputted presentation of a complete second image including the locally generated portion and a portion of the first video graphic image.

2. Summary of Support from the 1987 & 1981 Disclosures Entitling Claim to Priority Filing Date

The 1987 specification discloses that controller 20 controls all elements of the signal processor, such as the processor organizing discrete signal words into a signal unit or complete instruction. *See* 1987 Spec., P. 33, ll. 18-21; P. 36, ll. 32-33; P. 14, ll. 22-35; P. 15, ll. 26-31; P. 22, ll. 23-26; P. 24, ll. 2-3. A first video image is displayed. The processor instruction that results from organizing is disclosed in the WSW 1987 example whereby the instruction causes the display of the locally-generated image that replaces a portion of the first video image to display a second video image (Figure 1C, combined presentation). *See* 1987 Spec., P. 26, ll. 1-11. The step of generating an image by

processing user specific data is supported by the 1987 disclosure of a microcomputer generated graphic of the subscriber's own portfolio performance based on earlier delivered and stored stock price data. *See* 1987 Spec., P. 26, ll. 8-11.

Claim 179 is supported in the 1981 specification in a similar fashion. Controller 20 controls all elements of the signal processor. *See* 1981 Spec., Col. 8, ll. 25-27. That discrete signals are organized into processor instructions is disclosed in the 1981 specification generally at Col. 7, l. 36 - Col. 8, l. 62 and more specifically at Col. 19, ll. 17-20 and 60-67. There it is disclosed how control information is used by a buffer/comparator or controller device in order to assemble discrete signal words into a complete signal instruction. The 1981 specification discloses how the first video image is displayed followed by the locally-generated image. *See* 1981 Spec., Col. 19, l. 48 - Col. 20, l. 7. The generation of an image by processing user specific data stored at the receiver station prior to organizing the processor instruction is supported by the 1981 disclosure of a microcomputer generated graphic of viewer's own stocks' performance. *See* 1981 Spec., Col. 19, l. 67 - Col. 20, l. 2; Col. 19, ll. 35-41.

In claim 179, the first video graphics image corresponds to the studio graphic for WSW, while the second video graphics image corresponds to the combined presentation. Thus, it can be appreciated how the locally-generated portion (viewer's stock performance) is a portion of the second graphics image (combined presentation), which also includes a portion of the first graphics image (studio image).

3. Overview of Claim Amendments

a. Independent Claim 179

Claim 179 has been amended to clarify that the series of video images displayed at the video monitor "include[s] a first completed full-screen video graphic image."

The amendment was made to clarify the claim and does not add any new matter to the claim. Accordingly, the claim remains fully supported under § 112, first paragraph, by the support applicants have previously identified for claim 179.

The "passing" step in claim 179 has been amended to recite "passing . . . only a portion of a locally generated second completed full-screen video graphic image, wherein said only a portion of said locally generated second completed full-screen video graphic image is based on user specific data stored at said receiver station prior to said step of organizing . . ."

Support for this amendment exists in the 1987 disclosure of the TV monitor displaying the microcomputer generated graphic of the subscriber's own portfolio performance overlaying the studio generated graphic. *See* 1987 Spec., P. 26, ll. 8-11. The graphic of the subscriber's own portfolio performance is based on particular closing price datum recorded each day at the microcomputer which is applicable to the stocks in the preprogrammed portfolio of the computer. *See* 1987 Spec., P. 449, ll. 13-20. The graphic of the subscriber's own portfolio performance is only a portion of the full screen video image. The subscriber specific graphic is overlaid on the studio generated graphic depicting the performance of the overall (i.e., Dow Jones Industrial Average) stock market performance and the combined overlay is the completed full-screen video graphic image. Accordingly, the graphic of the subscriber's own portfolio performance is only a "portion" of the "locally generated second completed full-screen video graphic image."

Support for user specific data being stored at a receiver station prior to the organization of at least one processor instruction is found in the 1987 disclosure of the microcomputer receiving particular closing price datum (the user specific data) at 4:30 PM each weekday (*see* 1987 Spec., P. 449, ll. 13-26), while the instruction signals (the claimed discrete signals) are embedded in the WSW programming transmission, which is transmitted to the microcomputer at 8:30 PM each Friday (*see* 1987 Spec., P. 451, ll. 6-7 and P. 21, ll. 23-24). The organization of the signals into processor instructions at the